		Department of Civil Engineering			
		Semester – V (Session 2020-2021)			
		Subject: Fluid Mechanics - II			
		SUBJECT TEACHER: Prof. S. V. Dharpal			

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Karman-prandtl's equation	Fluid Mechanics: R.K.Bansal Fluid Mechanics: R.K.Rajput	2	Total Lectures for Unit I: 8
	2	Nikuradse's experiment		2	
	3	Velocity distribution laws & Universal resistance laws		2	
	4	Hydraulically smooth & rough pipes		2	
II	1	Uniform flow, open channel flow	Fluid Mechanics: R.K.Bansal Fluid Mechanics: R.K.Rajput	1	Total Lectures for Unit II: 8
	2	Geometric elements of rectangular & Trapezoidal sections		2	
	3	Chezys and Mannings equations		1	
	4	Most efficient rectangular & trapezoidal section		2	
	5	Specific energy curve, normal & critical depth		1	
	6	Analysis of surface profile		1	
III	1	Gradually varied flow, dynamic equation	Fluid Mechanics: R.K.Bansal Fluid Mechanics: R.K.Rajput	1	Total Lectures for Unit III: 8
	2	Analysis of surface profile		2	
	3	Rapidly varied flow		2	
	4	Hydraulic jump		2	
	5	Relation between conjugate depths		1	
IV	1	Buckingham's pie theoram	Fluid Mechanics: R.K.Bansal Fluid Mechanics: R.K.Rajput	3	Total Lectures for Unit IV: 8
	2	similitude		1	
	3	Dimensionless no.		1	
	4	Geometrically similar models		1	
	5	Reynolds law		1	
	6	Froudes law, model study of spillway		1	
V	1	Impact of jet on stationary & moving plates		2	Total Lectures for Unit V: 8
	2	Symmetrical and asymmetrical curve vanes		1	
	3	Moment of momentum equation		2	
	5	Hydraulic turbines- Pelton wheel & Francies		2	
	6	Work done power & efficiency, Specific speed of turbine		1	

VI	1	Classification of pump, Centrifugal pump		2	Total Lectures for Unit VI: 8
	2	Velocity diagram, work done, efficiency		1	
	3	Reciprocating pump		2	
	4	Jet pump		1	
	5	Submersible pump		1	
	6	Hydraulical ramp		1	
	7	Priming of pump		1	
			Total Lectures Required	**48**	

		Department of Civil Engineering			
		Semester – VIII (Session 2020-2021)			
		Subject: Project Planning Management			
		SUBJECT TEACHER: Prof. V. S. Gohatre			
Unit No.	**Topic No.**	**Topic with detail course outlines**	**Text and References**	**No. of Periods Allotted**	**Remark**
I	1	Project, Project Stakeholders, Project life cycle	CPM & PERT- Dr. B.C.Punmia & K K Khandelwal

Project Planning & Management – Kundan Singh, M.L.Kansal | 1 | Total Lectures for Unit I: 7 |
	2	Conceptual Phase, Planning Phase, Execution Phase, Termination phase.		1	
	3	Concept of feasibility study, Budgeting, Cash Flow		1	
	4	Risk assessment plan. Project planning- Steps, work break down structure		1	
	5	Scheduling. Project Monitoring & Controlling- Concept of Tracking		1	
	6	Reviewing and Rescheduling. Planning Tools: Basic concept of Gantt chart, Bar Chart		1	
	7	Mile stone chart, their advantage, limitations and overcoming measures		1	
II	1	Networking – Activity, Event, dummy Activity	CPM & PERT- Dr. B.C.Punmia & K K Khandelwal

Project Planning & Management – Kundan Singh, M.L.Kansal | 2 | Total Lectures for Unit II: 5 |
	2	Fulerson's numbering rule, Geometrical consideration.		1	
	3	Critical Path Method: Concept, technique, Critical path, Numerical on Time and Floats computation		1	
	4	concept of Updating Network and its numerical for computation.		1	
III	1	PERT: Concept, technique, three time estimates average time,	CPM & PERT- Dr. B.C.Punmia & K K Khandelwal

Project Planning & Management – Kundan Singh, M.L.Kansal | 2 | Total Lectures for Unit III: 5 |
	2	Critical path, slack computation S.D, Variance,		1	
	3	Probability factor, crash programme, normal and crash cost, normal and crash time		1	
	4	cost slope, Numerical on Probability computation, crashing		1	
IV	1	Concept of resource smoothening and leveling, Cost Curves	CPM & PERT- Dr. B.C.Punmia & K K Khandelwal

Project Planning & Management – Kundan Singh, M.L.Kansal | 1 | Total Lectures for Unit IV: 6 |
	2	Numerical of it. Introduction to Planning		2	
	3	Various stages and process for Work Breakdown structure		1	
	4	planning, scheduling and resource allocation for project by software		1	

	5	scheduling and resource allocation for construction project using software		1	
V	1	Management- Feyol's Principal of Management, Functions of management	CPM & PERT- Dr. B.C.Punmia & K K Khandelwal Project Planning & Management – Kundan Singh, M.L.Kansal	1	Total Lectures for Unit V: 7
	2	organization definition, type line, line and staff functional organization, quality control, ISO		1	
	3	Safety management, construction hazards in multistage building method of prevention of accident, injury rate		2	
	4	injury severity rate, injury index, National safety council, its role recommendation		2	
		Material management, Objective, Functions, Inventory, Need for inventory, ABC, EOQ analysis.		1	
VI	1	Power shovel: Construction, working, Output, factors affecting, cycle time, Problem on Output	CPM & PERT- Dr. B.C.Punmia & K K Khandelwal Project Planning & Management – Kundan Singh, M.L.Kansal	1	Total Lectures for Unit V: 6
	2	payback period of equipments		1	
	3	Dragline: Construction, working, output, factor affect ting output		2	
	4	cycle time, Problem on output		1	
	5	Concrete mixer, Tilting and non-tilting type construction working.		1	
			Total Lectures Required	**36**	

Department of Civil Engineering
Semester – VIII (Session 2020-2021)
Subject: Water Resources Engineering-II
SUBJECT TEACHER: Prof. P. S. Deshmukh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Reservoir Planning	Dr. Modi P.N. : Irrigation, Water Resources & Water Power Engg.	1	Total Lectures for Unit I: 6
	2	Reservoir Planning		1	
	3	Dams		1	
	4	Dams		1	
	5	Earth Dams		2	

II	1	Gravity Dams	Punmia : Irrigation & Water Power Engg.	1	Total Lectures for Unit II: 6
	2	Types of dams forces acting,		1	
	3	modes of failure;		1	
	4	principles of design of straight gravity dams,		1	
	5	Elementary and practical profile,		1	
	6	Earthquake and its effect on dams.		1	
III	1	Diversion Head Works: Selection of site and layout, components of diversion head works	Garg S.K. : Irrigation & Water Power Engg.	1	Total Lectures for Unit III: 6
	2	design of weirs on permeable foundation, construction details of Kolhapur type weirs.		1	
	3	Spillways: Types of spillway, spillway capacity, Flood routing through spillways,		1	
	4	Types of crest gates. Energy dissipaters: meaning,		2	
	5	Objectives, location. Types hydraulic jump, jet diffusion and Bucket type		1	
IV	1	Canal Irrigation: Types of canals, Parts of Canal irrigation system, Canal alignment	Dahigaonkar J.G. : T.B. of Irrigation Engg., Wheeler & Co.	1	Total Lectures for Unit IV: 6
	2	Design of unlined and lined Canals,		2	
	3	Balancing depth		2	
	4	cross section of canal, propose and types of canal lining		1	
V	1	Canal Masonry Works: Types and only design principles and description	Garg S.K. : Irrigation & Water Power Engg.	1	Total Lectures for Unit V: 5
	2	Regulation works: Canal fall's, Head Regulator, Cross regulator, Canal escapes and canal outlets.		2	
	3	Cross drainage works: Aqueduct, Syphon aqueducts, super passage, canal siphon, level crossing		2	
VI	1	Well Irrigation : open wells and tube wells, types of tube walls, duty of tube well water.	Garg S.K. : Irrigation & Water Power Engg.	**1**	Total Lectures for Unit V: 6
	2	Water Management : Water management and distribution, cooperative water user's organization, warabandi, conjunctive use of water.		**1**	
	3	Water shed Management : Need of watershed management, importance of soil conservation measures, techniques ground water harvesting.		**3**	
	4	River Training Works : Need and types of river training works.		**1**	

				Total Lectures Required	**35**

			Department of Civil Engineering		
			Semester – IV (Session 2020-2021)		
			Subject: Building Planning Designing and CAD		
			SUBJECT TEACHER: Prof. P. S. Deshmukh		

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction: Importance of building drawing for Civil Engineering	Shah, Kale & Patki, Building Planning & Drawing, Tata McGraw-Hill plubication	1	Total Lectures for Unit I: 5
	2	Method of drawing – Selection ofscales for various drawings, types		1	
	3	Abbreviations & graphical symbols used in Civil EngineeringDrawing		2	
	4	Combined first angle & third anglemethod of projection.		1	
II	1	Layout of sheet for civil engineering drawing	Shah, Kale & Patki, Building Planning & Drawing, Tata McGraw-Hill plubication	1	Total Lectures for Unit II: 6
	2	Requirements of drawing as per plan sanctioning authorities.		1	
	3	Concept of line plan & working drawings of the building.		1	
	4	Developing working drawings of the building from the given lineplan		2	
	5	Necessityand use of working drawing.		1	
III	1	Concept of site plan, block plan andlayout plan. Importance and detail	Dr. Kumar Swamy & Rao Swamy, Charotar publications	1	Total Lectures for Unit III: 6
	2	Developing workingdrawing and foundation plan for load bearing		1	
	3	Planning of residential building. Introduction, general principleso		1	
	4	Planning of residential building. Introduction, general principleso		2	
	5	Climate and design consideration. Orientation of buildings		1	
	1	Building rules and by laws, for residential buildings, conversionof	Shah, Kale & Patki, Building Planning	1	

	2	Types of public building and their requirements, planning of publicb	& Drawing, Tata McGraw-Hill plubication	2	Total Lectures for Unit IV: 6
IV	3	Preparing line plans of different public buildings suchas schools,		2	
	4	Free-hand sketching : Importancein Civil engineering.		1	
	5	Perspective drawing		1	
<td colspan="6" style="background-color:#d89090"></td>
			Total Lectures Required	**23**	

Department of Civil Engg					
Semester –III (Session 2020-2021)					
Subject: Transportation Engg					
SUBJECT TEACHER: Prof. V. S. Gohatre					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
	1	Road Transport characteristics	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit I: 6
I	2	classification of Roads `		1	
	3	Road Patterns		1	
	4	Alignment principles		1	
	5	Survey for highway		2	
<td colspan="6" style="background-color:#d89090"></td>
	1	Cross sectional elements	Jasto and Khanna L.R.Kadiyali NPTL	1	
	2	Right of way, Camber,Gradient		1	
II	2	Typical Highway cross section, PIEV Theory		1	Total Lectures for Unit II: 8
	3	stopping sight distance,overtaking sight distance		1	
	4	Horizontal alignment, curves,		1	

	5	superelevation		1	
	6	Numerical		2	
III	1	Components of Flexible and Rigid pavement, Design factor	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit III: 6
	2	Traffic Characteristics, Traffic Studies		1	
	3	Construction and Maintenance – WBM Surface dressing		1	
	4	bituminous roads and construction procedure		1	
	5	Road parking system,		1	
	6	traffic control devices and 3 E's of traffic		1	
IV	1	Railway transportation : track sections, embankment & cutting	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit IV: 6
	2	Points and crossing Left &right hand turnouts.		1	
	3	Objects, Permanent way, gauges, coning of wheels		1	
	4	components of permanent way, Sleeper density,		1	
	5	Rail fixtures & fastening		1	
	6	Rail types and functions.		1	
	1	Agencies controlling national & international aviation	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit V: 7
	2	various surveys to be conducted, airport site selection,		1	
	3	Aero plane component parts, Aircraft characteristics		1	

V					
	4	Airport obstructions: Zoning laws		1	
	5	wind rose diagram.		1	
	6	Basic runway length and corrections		1	
	7	Apron layout, Aircraft parking & parking system		1	
VI	1	Size and shape of tunnels, and Tunnel lining.	Jasto and Khanna L.R.Kadiyali NPTL	1	05
	2	Tunnel drainage, ventilation & lighting of tunnels		1	
	3	Bridge Engineering-Components, classification and identification		1	
	4	Estimation of flood discharge, water way, scour depth, depth of foundation, Afflux, clearance and free board,		2	
			Total Lectures Required	**38**	

Department of Civil Engg					
Semester –III (Session 2020-2021)					
Subject: Transportation Engg					
SUBJECT TEACHER: Prof . M.S.Mahalle					
Unit No.	**Topic No.**	**Topic with detail course outlines**	**Text and References**	**No. of Periods Allotted**	**Remark**
I	1	Road Transport characteristics	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit I: 6
	2	classification of Roads `		1	
	3	Road Patterns		1	
	4	Alignment principles		1	

	5	Survey for highway		2	
II	1	Cross sectional elements	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit II: 8
	2	Right of way, Camber,Gradient		1	
	2	Typical Highway cross section, PIEV Theory		1	
	3	stopping sight distance,overtaking sight distance		1	
	4	Horizontal alignment, curves,		1	
	5	superelevation		1	
	6	Numerical		2	
III	1	Components of Flexible and Rigid pavement, Design factor	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit III: 6
	2	Traffic Characteristics, Traffic Studies		1	
	3	Construction and Maintenance – WBM Surface dressing		1	
	4	bituminous roads and construction procedure		1	
	5	Road parking system,		1	
	6	traffic control devices and 3 E's of traffic		1	
IV	1	Railway transportation : track sections, embankment & cutting	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures
	2	Points and crossing Left &right hand turnouts.		1	

	3	Objects, Permanent way, gauges, coning of wheels		1	for Unit IV: 6
	4	components of permanent way, Sleeper density,		1	
	5	Rail fixtures & fastening		1	
	6	Rail types and functions.		1	
V	1	Agencies controlling national & international aviation	Jasto and Khanna L.R.Kadiyali NPTL	1	Total Lectures for Unit V: 7
	2	various surveys to be conducted, airport site selection,		1	
	3	Aero plane component parts, Aircraft characteristics		1	
	4	Airport obstructions: Zoning laws		1	
	5	wind rose diagram.		1	
	6	Basic runway length and corrections		1	
	7	Apron layout, Aircraft parking & parking system		1	
VI	1	Size and shape of tunnels, and Tunnel lining.	Jasto and Khanna L.R.Kadiyali NPTL	1	05
	2	Tunnel drainage, ventilation & lighting of tunnels		1	
	3	Bridge Engineering-Components, classification and identification		1	
	4	Estimation of flood discharge, water way, scour depth, depth of foundation, Afflux, clearance and free board,		2	
			Total Lectures Required		**38**

Department of Civil Engineering

Semester – VI (Session 2020-2021)

Subject: 6CE02: DESIGN OF RCC & PRESTRESS CONCRETE STRUCTURES					
Subject Code: 6CE02 Section: A					

SUBJECT TEACHER: Prof. P.S.Pajgade					

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Design of interior panel of flat slab by direct design method. (Problem on square panel only)	Dr. Shah V.L. &Karve S.R.: Limit State Design.	6	Total Lectures for Unit I: 14
	2	Design of cantilever retaining wall and Counterfort retaining wall.		6	
II	1	Design of combined footing.	Dr. Shah V.L. &Karve S.R.: Limit State Design.	8	Total Lectures for Unit II: 12
	2	Complete design of simple, small structures like Canopies & Parking shed.		6	
III	1	Introduction to Prestressed concrete: Materials and their characteristics, types of prestressing, Methods and various prestressing systems, Losses of prestress	Krishna Raju, N.; Prestressed Concrete Structures; TMH; Delhi	5	Total Lectures for Unit III: 8
	2	Analysis of beams for flexure, under working load for Rectangular and flanged sections.		3	
IV	1	Basic Design of rectangular sections for flexure by limit state method, Design of one way single span slabs.	Krishna Raju, N.; Prestressed Concrete Structures; TMH; Delhi	4	Total Lectures for Unit IV: 6
	2	Design of prestressed concrete circular water tanks by IS code method.		2	
			Total Lectures Required	**40**	

Department of Civil Engineering			
Semester – VII (Session 2020-2021)			
Subject: Design of steel Structures Subject Code:7CE03 Section: A			
SUBJECT TEACHER: Prof. P.S.Pajgade			

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to WSM, LSM & plastic analysis.	Duggal, S. K., Design of Steel Structures, Tata McGraw Hill Pub. Company Ltd. N. Subrramanyam, Design of Steel Structures, Oxford University Press, 2008.	8	Total Lectures for Unit I: 14
	2	Design of bolted & welded connections subjected to axial loading.		6	
II	1	1. Design of compression & tension member.	Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	6	Total Lectures for Unit II: 12
	2	1. Design of roof truss.		6	
III	1	1. Design of simple & compound columns for axial & eccentric loading.	Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	4	Total Lectures for Unit III: 8
	2	1. Design of column bases (Slab base & Gusseted base) subjected to axial load.		4	
IV	1	1. Design of simple Beams.	Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	4	Total Lectures for Unit IV: 6
	2	1. Design of compound Beams.		2	
			Total Lectures Required	**40**	

Department of Civil Engineering
Semester – IV (Session 2020-2021)
Subject: Geotechnical Engineering - I
SUBJECT TEACHER: Prof. P. V. Kolhe

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	History of development of soil mechanics, formation of soil, its significance to the field problems	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit I: **8**
	2	Soil properties and its classification		1	
	3	Definition of soil, soil as a three phase system, weight – volume relationship		1	
	4	Index properties of coarse and fine grained soil		1	
	5	BIS classification of fine grained & coarse grained soil		1	
	6	Numericals		3	
II	1	Concept of clay mineral, major soil minerals, their structural formation and properties	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit II: **6**
	2	Mechanics of compaction, factors affecting compaction, different structures of soil		1	
	3	Standard and modified Proctor test, their field Determination, zero air void line, concept of wet of optimum, and dry of optimum		1	
	4	Field compaction & their control. CBR test and CBR value for soak and unsoaked conditions.		1	
	5	Numericals		2	
III	1	Concept of absorbed water, surface tension	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit III: **7**
	2	Capillarity and its effect on Soil properties permeability of soil		1	
	3	Darcy's law and validity, Discharge and seepage velocity, factors affecting Permeability		1	
	4	Determination of coefficient of permeability laboratory and field methods.		1	
	5	Permeability for stratified deposits, Drainage and Dewatering Methods		1	
	6	Numericals		2	
IV	1	Laplace equation, its derivation in Cartesian co-ordinate system, its application for the computation of discharge seepage	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit IV: **8**
	2	Seepage pressure, Quick sand condition with numericals		1	
	3	Concepts flow net, method to draw flow nets, characteristics and use of flow net		1	
	4	Preliminary problem of discharge, estimation of discharge through homogenous earthen embankment		1	
	5	Design Terzaghi's criteria for graded filter, concept of piping and criteria of stability against piping		2	
	6	Numericals		2	
V	1	A physical concept of shear strength, Introduction of Mohr's stress diagram	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit V: **7**
	2	Mohr's failure criteria, Mohr-Coulomb's theory and development of failure envelopes		1	
	3	Unconfined compression test, Laboratory measurement of shear strength for different drainage, conditions by direct shear test		1	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
	4	Triaxial test for various drainage conditions Merits and demerits of various shear strength tests.		1	
	5	Concept of pore pressure coefficient shear characteristics of sand, NC and OC clays and partially saturated soil		1	
	6	Numericals		2	
VI	1	State of stress at a point, stress distribution in soil mass	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit VI: **6**
	2	Boussinesq's theory and its applications, point load, uniformly loaded rectangular and circular area		1	
	3	New-mark's chart, its preparation and use, equivalent point load Compression of laterally confined soil, concept of consolidation spring analogy		1	
	4	Terzaghi's theory of one dimensional consolidation		1	
	5	Determination of Cv Cassagrande's method for determination of pre-consolidation pressure.		1	
	6	Numericals		1	
Total Lectures Required				**42**	

		Department of Civil Engineering			
		Semester – VII (Session 2020-2021)			
		Subject: Geotechnical Engineering - II			
		SUBJECT TEACHER: Prof. P. V. Kolhe			

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Field exploration, objectives and methods of exploration	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit I: **7**
	2	Planning of exploration programme soil boring, Introduction to methods of soil exploration		1	
	3	SPT test, field vane shear test		1	
	4	Geophysical methods, electrical resistivity and soil refraction methods		1	
	5	Soil log bore presentation and interpretation exploration data. Ground improvement techniques		1	
	6	Numericals		2	
II	1	Bearing capacity and concept of local and general shear failure	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit II: **8**
	2	Terzaghi's and Skempton's Theory of BC		1	
	3	Meyerhof's and BIS method for bearing capacity		1	
	4	Determination bearing capacity of granular soils based on SPT value		1	
	5	Plate load test, Static Cone Penetrometer (In Situ methods for bearing capacity)		1	
	6	Pressure meter test contact pressure distribution diagram below the base of footing, Concept of raft foundation and floating foundation		1	

	7	Numericals		2	
III	1	Earth pressure at rest, general & local Stages of plastic equilibrium, Rankine's and coulomb's theory of active and passive earth pressure on retaining wall	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit III: **8**
	2	Influence of surcharge, water table, wall friction		1	
	3	Rebhann's and Culmann's simple graphical methods		1	
	4	Introduction to sheet pile and bulkhead and their classifications		1	
	5	(No design criteria) Cofferdam purpose, various types and their suitability.		1	
	6	Numericals		3	
IV	1	Classification of piles and their uses	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit IV: **8**
	2	Static analysis along with numericals		2	
	3	Dynamic analysis along with numericals		2	
	4	Piles in group and their capacity, group efficiency, factors affecting group efficiency		1	
	5	Behaviour of group of pile in sandy and in clayey soil, pile load test, effect of pile cap		1	
	6	Criteria for spacing and depth of piles. IS design criterion for undereamed Pile in clay and sands		1	
V	1	Immediate, primary and secondary settlement for footing resting on homogenous isotropic, cohesive and cohesion less soils related to single footing, combined footing, & raft foundation etc	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit V: **6**
	2	Concept of differential settlement factors and causes for differential settlement, BIS requirement for total as well as differential settlement		1	
	3	Proportioning of footing for uniform settlement		1	
	4	Computation of total and differential settlement of a single pile and group of piles in sandy and clayey soil.		1	
	5	Numericals		2	
VI	1	Component & their function, sinking of well, types of force system, and their computation	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit VI: **7**
	2	Design criteria for various components of wells		1	
	3	Tilting and shifting, Bearing capacity of well as per BIS.		1	
	4	Stability analysis of infinite and finite slope, causes of failure of slopes		1	
	5	Stability analysis of infinite and finite slope in cohesive and non-cohesive soils		1	
	6	Numericals		2	
Total Lectures Required				**44**	

Department of Civil Engineering

Semester – VIII (Session 2020-2021)					
Subject: Dam Engineering					
SUBJECT TEACHER: Prof. S.A.Baitule					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to Dam Engineering : Different classification for dams	Sharma H.D : Concrete Dams, Metropolitan Book Co, Delhi Satyanarayanan : Construction, Planning & Equipment, Standard Pub.	1	Total Lectures for Unit I: **7**
	2	Relative advantages and disadvantages of various dam selection or types of dam		1	
	3	Investigation of dam sites		1	
	4	Engineering surveys, geological investigation, subsurface exploration programme		1	
	5	Economic height of dam		1	
	6	Construction machinary, material, money, inventory.		2	
II	1	Rockfill dam : Introduction	Sherard et al : Earth and Rockfill Dam, John Wiley, New York.	1	Total Lectures for Unit II:**6**
	2	General characteristics		1	
	3	Materials and testing of rockfill material		1	
	4	Foundation requirements of rockfill dam		1	
	5	Design consideration of rockfill dam		1	
	6	Rockfill placement,		1	
III	1	Arch dam :- components	Sharma H.D : Concrete Dams, Metropolitan Book Co, Delhi. USBR : Design of Gravity Dam.	1	Total Lectures for Unit III: **8**
	2	Types and methods for design of Arch dam		2	
	3	Buttress dam : components, types		1	
	4	Forces acting, Buttress spacing		1	
	5	Master curve for economic spacing		1	
	6	Preliminary design Solid Gravity dams : Analysis & Design of gravity dam.		2	
IV	1	Spillways: choice of types, crest gates	Sharma H.D : Concrete Dams, Metropolitan Book Co, Delhi. Varshney R.S. : Concrete Dam, Ox IBH, Mumbai.	2	Total Lectures for Unit IV: **7**
	2	Hydraulic design, comparison		1	
	3	Approach and tail channel, J.H.C. & tail water rating curve		1	
	4	Energy Dissipaters: types, components		1	
	5	Design of hydraulic jump type, basins		1	
	6	Ski-bucket type, roller bucket.		1	
V	1	Head Regulators : requirements, types	USBR : Design of Small Dams. Sharma H.D : Concrete Dams, Metropolitan Book Co, Delhi.	1	Total Lectures for Unit V: **7**
	2	Foundation treatment including uplift consideration		1	
	3	Bank connection, energy dissipation, hydraulic design of opening and barrel, ventilation, types of gates.		2	
	4	Approach Channel, case study for one on rock foundation and one on permeable foundation.		1	
	5	Model Studies: scales design principles, materials, scale effects for model of dams spillway		2	

Unit		Topic with detail course outlines	Text and References			
VI	1	Instrumentation : In earth dam and solid gravity dams, piezo meters, settlement, gauges (surface monuments, base plate, cross arm)	Peurifoy R.L. : Construction, Planning and Equipments, McGraw Hill Book Co. Satyanarayanan : Construction, Planning & Equipment, Standard Pub.	1		Total Lectures for Unit VI: **7**
	2	Strain meters joint meters		1		
	3	Thermometers, stress meters, pore pressure cells, plumb-bob Seismograph		1		
	4	Water level gauges (description, object, location, working, installation of each		1		
	5	Increasing height of masonry and concrete dams		1		
	6	Strengthening, repairs and maintenance, leakage, evaporation controls. evaporation controls.		2		
Total Lectures Required						**44**

Department of Civil Engg
Semester –VI (Session 2020-21)
Subject: Transportation Engg II
SUBJECT TEACHER: Prof. V. S. Gohatre

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Railway Transportation, Classification of railway	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit I: 6
	2	Track sections in embankment `		1	
	3	Track sections in cutting		1	
	4	TRack Std Terminology, Traction		1	
	5	Tractive Resistances		2	
II	1	Survey	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit II: 8
	2	Permanent Way c/s		1	
	2	Rails, Sleepers		1	
	3	Sleeper Density		1	
	4	Problems On Sleeper		1	
	5	Coning Of Wheel,		1	
	6	Rail Section		2	

III	1	Points and crossing Left & right hand turnouts	S.C.SAXENA S.P.ARORA NPTL	2	Total Lectures for Unit III: 8
	2	design calculations for turnout & cross over		2	
	3	types of Track junction, long welded rails. Station and yards : types, function, facilities & equipment		1	
	4	Railway signalling and interlocking: objects, classification		1	
	5	types of signals		1	
	6	, control & movement of trains.		1	

IV	1	Various surveys to be conducted, airport site selection	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit IV: 6
	2	Airport drainage		1	
	3	Aeroplane component parts, Aircraft characteristics		1	
	4	Airport obstructions: Zoning laws, imaginary surfaces approach		1	
	5	turning zone Runway and Taxiway design		1	
	6	wind rose diagram		1	
	7	basic runway length and corrections			

V	1	Airport Markings	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit V: 7
	2	Airport lighting		1	
	3	Airport terminal		1	
	4	Aircraft parking & parking system		1	
	5	taxiway and other areas		1	
	6	Airport traffic contro		1	
	7	instrumental landing systems accidents in the air.		1	

VI	1	Tunnel imoportance, Neccesity	S.C.SAXENA	1	
	2	Methods of tunneling in soft ground	S.P.ARORA	1	08
	3	tunneling methods	NPTL	1	
	4	Needle beam method		1	
	5	Tunnel lining, drainage		2	
	6	ventilation & lighting of tunnels		2	
			Total Lectures Required	**43**	

		Department of Civil Engg			
		Semester –VI (Session 2017-18)			
		Subject: Transportation Engg II			
		SUBJECT TEACHER: Prof . M.S.Mahalle			

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Railway Transportation, Classification of railway	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit I: 6
	2	Track sections in embankment `		1	
	3	Track sections in cutting		1	
	4	TRack Std Terminology, Traction		1	
	5	Tractive Resistances		2	
II	1	Survey	S.C.SAXENA S.P.ARORA NPTL	1	
	2	Permanent Way c/s		1	
	2	Rails, Sleepers		1	Total Lectures for Unit II: 8
	3	Sleeper Density		1	
	4	Problems On Sleeper		1	
	5	Coning Of Wheel,		1	
	6	Rail Section		2	
	1	Points and crossing Left & right hand turnouts	S.C.SAXENA S.P.ARORA	2	

III	2	design calculations for turnout & cross over	NPTL	2	Total Lectures for Unit III: 8
	3	types of Track junction, long welded rails. Station and yards : types, function, facilities & equipment		1	
	4	Railway signalling and interlocking: objects, classification		1	
	5	types of signals		1	
	6	, control & movement of trains.		1	
IV	1	Various surveys to be conducted, airport site selection	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit IV: 6
	2	Airport drainage		1	
	3	Aeroplane component parts, Aircraft characteristics		1	
	4	Airport obstructions: Zoning laws, imaginary surfaces approach		1	
	5	turning zone Runway and Taxiway design		1	
	6	wind rose diagram		1	
	7	basic runway length and corrections			
V	1	Airport Markings	S.C.SAXENA S.P.ARORA NPTL	1	Total Lectures for Unit V: 7
	2	Airport lighting		1	
	3	Airport terminal		1	
	4	Aircraft parking & parking system		1	
	5	taxiway and other areas		1	
	6	Airport traffic contro		1	
	7	instrumental landing systems accidents in the air.		1	
VI	1	Tunnel imoportance, Neccesity	S.C.SAXENA	1	
	2	Methods of tunneling in soft ground	S.P.ARORA	1	08

	3	tunneling methods	NPTL	1	
	4	Needle beam method		1	
	5	Tunnel lining, drainage		2	
	6	ventilation & lighting of tunnels		2	
			Total Lectures Required	**43**	

Department of Civil Engineering
Semester – VIII (Session 2020-2021)
Subject: Environmental Engineering - II

		SUBJECT TEACHER: Prof. S. V. Dharpal			
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Quantity of storm water, DWF	Waste Water Engineering: S.K.Garg Water supply & Sanitory Engineering: G.S.Birdie	1	Total Lectures for Unit I: 8
	2	Flow system of sewage		1	
	3	Layout of sewerage system		2	
	4	Sewer design		2	
	5	Laying out of circular sewer		1	
	6	Testing & maintenance of sewer		1	
II	1	Waste water characteristics	Waste Water Engineering: S.K.Garg Water supply & Sanitory Engineering: G.S.Birdie	1	Total Lectures for Unit II: 8
	2	Sampling of sewage		1	
	3	BOD & COD		1	
	4	Treatment of sewage-preliminary, primarily & secondary		1	
	5	Flow diagram of Sewage treatment plant		1	
	6	Preliminary treatment – Screening, Grit chamber, detritus tank		2	
	7	Primary treatment- Sedimentation		1	
III	1	Trickling filter	Waste Water Engineering: S.K.Garg Water supply & Sanitory Engineering: G.S.Birdie	1	Total Lectures for Unit III: 8
	2	Recirculation modification of trickling filter		2	
	3	Activated sludge process rates		2	
	4	Methods of aeration, loading		1	
	5	Modified forms of Activated sludge process		1	
	6	MLSS, SVI, F/M		1	
IV	1	Oxidation pond	Waste Water Engineering: S.K.Garg Water supply & Sanitory Engineering: G.S.Birdie	2	Total Lectures for Unit IV: 8
	2	Aerated lagoon		1	
	3	Treatment & Disposal of sludge		1	
	4	Septic tank working & design		2	
	5	Disposal of sewage on land & in stream		1	
	6	Self-purification capacity of stream		1	
V	1	Physical Chemical and biological characteristics of solid waste	Waste Water Engineering: S.K.Garg Water supply & Sanitory	2	Total Lectures for Unit V: 8
	2	Collection of solid waste		2	
	3	Frequency of collection & Methodology in setting up collection bins		2	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
	4	Disposal of solid waste	Engineering: G.S.Birdie	2	
VI	1	Air pollution, sources	Waste Water Engineering: S.K.Garg Water supply & Sanitary Engineering: G.S.Birdie	1	Total Lectures for Unit VI: 8
	2	Effects of air pollution on men, material		1	
	3	Prevention of air pollution at source		1	
	4	Air pollution control devices		2	
	5	Human tolerance level		1	
	6	Introduction to EIA		1	
	7	Environmental audit		1	
			Total Lectures Required	**48**	

Department of Civil Engineering					
Semester – VII (Session 2020-2021)					
Subject: Environmental Engineering-I					
SUBJECT TEACHER: Prof. R. S. Adhau					
Unit No.	**Topic No.**	**Topic with detail course outlines**	**Text and References**	**No. of Periods Allotted**	**Remark**
I	1	Quantity Estimation of water: Demand of water Consumption for various purposes.	Water Supply Engineering- S. K. Garg	1	Total Lectures for Unit I: 7
	2	Fire Demand, Per capita demand. Factors affecting consumption.		2	
	3	Fluctuation in demand. Design period, forecasting population.		2	
	4	Sources: Surface sources, ground water sources		1	
	5	Infiltration Galleries, Relative merits of sources		1	
II	1	Water quality: Impurities in water, their effects and significance.	Water Supply Engineering- S. K. Garg	1	Total Lectures for Unit II: 10
	2	Water borne diseases, collection of water samples.		1	
	3	Water analysis- physical		2	
	4	chemical and bacteriological		1	
	5	Water quality standards: I.S. & WHO		1	
	6	Flow diagrams and layouts of different water treatment works		2	
	7	Intakes- type, location, requirement & features		2	

			Water Supply Engineering- S. K. Garg		
III	1	Aeration: Purpose, types of gravity aerators & spray aerators		1	Total Lectures for Unit III: 7
	2	Sedimentation: Plain and with coagulation		1	
	3	Different coagulants used, dose of coagulant, Jar test,		1	
	4	Flocculation, Clarrifloculator		1	
	5	Design criteria for sedimentation tanks, surface loading		1	
	6	Simple problems on design of sedimentation tanks		2	
			Water Supply Engineering- S. K. Garg		
IV	1	Filtration :- Rapid sand and slow sand filters		1	Total Lectures for Unit IV: 7
	2	Filter media, Rate of filtration,		1	
	3	Under drainage system and washing process		1	
	4	Control system, Negative head		1	
	5	operating difficulties		1	
	6	Simple design problems on rapid sand filters		2	
			Water Supply Engineering- S. K. Garg		
V	1	Disinfection :- Requirement of good disinfectant		1	Total Lectures for Unit V: 8
	2	methods of disinfection		1	
	3	Chlorination: Methods, prechlorination, post chlorination		1	
	4	Break point chlorination and super chlorination, forms of chlorine		2	
	5	Use of bleaching powder - Simple problems.		2	
	6	Introduction to tertiary treatments-Softening and Defloridation.		1	
			Water Supply Engineering- S. K. Garg		
VI	1	Distribution system: - Types of supply: Continuous, and intermittent		**1**	Total Lectures for Unit VI: 6
	2	Types of system: Gravity, Pumping and combined gravity and pumping, Layouts of distributions system.		**2**	
	3	Maintenance of distribution system		**1**	
	4	Equalising storage, Type of storage reservoirs, capacity		**1**	
	5	Types of conduits, joints, appurtenances. Pipe laying and testing.		**1**	
			Total Lectures Required	**45**	

Department of Civil Engineering

Semester – VII (Session 2020-2021) Section C					
Subject: Design of Steel Structure (7CE03)					
SUBJECT TEACHER: Prof. S. R. Bhuskade					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Basic Introduction	Duggal, S. K., Design of Steel Structures, Tata McGraw Hill Pub. Company Ltd. N. Subrramanyam, Design of Steel Structures, Oxford University Press, 2008. Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	1	Total Lectures for Unit I: 11
	2	Introduction To LSM & WSM		1	
	3	Introduction To Plastic Analyasis		2	
	4	Design of Bolted Connection		4	
	5	Design of Welded Connection		3	
II	1	Design of Tension Member	Duggal, S. K., Design of Steel Structures, Tata McGraw Hill Pub. Company Ltd. N. Subrramanyam, Design of Steel Structures, Oxford University Press, 2008. Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	4	Total Lectures for Unit II: 11
	2	Design of Compression Member		3	
	3	Design of Industrial shed		4	
III	1	Design of simple Column	Duggal, S. K., Design of Steel Structures, Tata McGraw Hill Pub. Company Ltd. N. Subrramanyam, Design of Steel Structures, Oxford University Press, 2008. Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	2	Total Lectures for Unit III: 10
	2	Design of compound Column		3	
	3	Design of column bases subjected to axial load & moment, gusseted base.		2	
	4	Design of column bases subjected to axial load & moment, solid slab base.		3	
IV	1	Design of Simple Beam	Duggal, S. K., Design of Steel Structures, Tata McGraw Hill Pub. Company Ltd. N. Subrramanyam, Design of Steel Structures, Oxford University Press, 2008. Shah & Karve, Design of steel structures. Sheyakar, Design of steel structure. Bhavikatti, Design of steel structure	3	Total Lectures for Unit IV: 10
	2	Design of Compound Beam		3	
			Total Lectures Required	**42**	

Department of Civil Engineering					
Semester – VI (Session 2020-2021) Section C					
Subject: Design of RCC & Prestress Concrete Structures (6CE02)					
SUBJECT TEACHER: Prof. S. R. Bhuskade					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction of Flat Slab-1	Jain, A. K., Reinforced Concrete	1	Total Lectures for Unit I: 11
	2	Design of Flat Slab	Jaikrishna and Jain, Plain and Reinforced Concrete, Volume I and II	5	
	3	Design of Cantilever Retaining Wall	Sinham S. N., Reinforced Concrete	3	
	4	Design of Countrfort Retaining Wall	Dr. Shah V.L. & Karve S.R.: Limit State Design.	2	
II	1	Design of Combine Footing	Jain, A. K., Reinforced Concrete Jaikrishna and Jain, Plain and Reinforced Concrete, Volume I and II	5	Total Lectures for Unit II: 10
	2	Complete design of simple, small structures like Canopies & Parking shed	Sinham S. N., Reinforced Concrete Dr. Shah V.L. & Karve S.R.: Limit State Design.	5	
III	1	Introduction to Prestress Concrete	Edward G. Nawy "Prestressed Concrete- A fundamental Approach", Prentice Hall	3	Total Lectures for Unit III: 11
	2	Analysis of Prestress Beam	Lin, T. Y. and Burns N. H., Design of Prestressed Concrete Structures,	4	
	3	Losses in Prestress Concrete	John Wiley and Sons Krishna Raju, N.; Prestressed Concrete Structures; TMH; Delhi	4	
IV	1	Design of Prestress Beam	Managerial Economics- Dr. D.M. Mithani HP	3	Total Lectures for Unit IV: 10
	2	Design of Prestress Slab	Managerial Economics- Grrtika	3	
	3	Design of water tank	Managerial Economics- Ahuja	4	
			Total Lectures Required	42	

Department of Civil Engineering					
Semester – VII (Session 2020-2021)					
Subject: ACT					
SUBJECT TEACHER: Prof. S.D.Malkkhede					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark

I	1	Admixtures and construction chemicals: Introduction, admixtures, plasticizers (Water reducers), action of plasticizers,	Concrete technology by MS shetty	1	Total Lectures for Unit I: 6
	2	Dispersion, retarding effect, superplasticizers (High range water reducers), site problems in the use of plasticizers,		1	
	3	Retarders, accelerators, air-entraining admixtures, pozzolanic or mineral admixtures, fly ash, silica fume, rice husk ash, metakaolin,		1	
	4	Ground granulated blast furnace slag (GGBFS), damp and water proofing admixtures		1	
	5	Protective materials and their properties as moisture barrier systems, above-grade and below grade water proofing of concrete structures		1	
	6	Thermal protection coating, IS code provisions for admixtures		1	
II	1	Durability of concrete: Introduction, strength and durability relationship	Concrete technology by MS shetty	1	Total Lectures for Unit II: 6
	2	Volume change in concrete,		1	
	3	Significance of durability		1	
	4	Impact of water cement ratio on durability, factors affecting durability, methods of predicting durability		1	
	5	IS code provisions for durability of concrete		1	
	6	Interaction between permeability, volume change and cracking.		1	
III	1	Deformation in concrete: Introduction, deformation of concrete in Indian climate, permeability	Concrete technology by MS shetty	1	Total Lectures for Unit III: 6
	2	Interaction between permeability, volume change and cracking		1	
	3	Factors contributing cracks in concrete		1	
	4	Sulphate attack, alkali aggregate reaction		1	
	5	Corrosion of embedded steel, controlling measures, corrosion inhibitors, coatings to embedded reinforcement		1	
	6	Corrosion resistant steels, cathodic protection systems.		1	
IV	1	Special concrete and concreting techniques	Concrete technology by MS shetty	1	Total Lectures for Unit IV: 7
	2	Introduction to special concrete, Lightweight, aerated, no-fines		1	
	3	High density, fibre reinforced		1	
	4	Polymer, prepacked, self-compacted (self leveled), and high volume fly ash (HVFA) concrete		1	
	5	Introduction to special concreting techniques, Gunite or shotcrete, ferrocement		2	
	6	Roller compacted concrete, and ready mix concrete casting and applications		1	
V	1	Repairs and rehabilitations:	Concrete technology by MS shetty	1	Total Lectures for Unit V: 7
	2	Introduction, need for repairs, crack width, construction chemicals- curing compounds		1	
	3	Surface hardeners, polymer modified mortar, bond aid for plasters, guniting aid, silicon based water repellent materials,		1	
	4	Protective and decorative coatings		1	
	5	Injection grout for cracks, coatings for embedded reinforcement concrete		2	
	6	Repair systems, stages of repair works.		1	
VI	1	Non-destructive testing of concrete	Concrete technology by MS shetty	1	Total Lectures for Unit VI: 7
	2	Introduction, rebound hammer, limitations, rebound number and strength of concrete		1	
	3	Penetration technique, pullout test, resonant frequency, pulse velocity method,		1	
	4	Corrosion analyser, rebar locators		1	
	5	Introduction to precast concrete, materials and their characteristics, features,		2	
	6	Precast concrete structure, type of structure, various precast element and their uses, types of connection		1	

			Total Lectures Required	
			39	

		Department of Civil Engineering			
		Semester – III (Session 2020-2021)			
		Subject: CTRCC			
		SUBJECT TEACHER: Prof. S.D.Malkkhede			

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction, Syllabus	Concrete technology by MS shetty	1	Total Lectures for Unit I: 6
	2	Cement Manufacturing process.		1	
	3	Wet & Dry process		1	
	4	Properties of fresh concrete:		2	
	5	Mixing, centering & formwork, placing, compaction and curing of concrete		1	
II	1	Properties of hardened concrete:,	Concrete technology by MS shetty	1	Total Lectures for Unit II: 8
	2	Grades of concrete		1	
	2	Properties of concrete,		1	
	3	Elasticity, creep, shrinkage.		1	
	4	Durability of concrete, laboratory tests on concrete		1	
	5	Durability of concrete, laboratory tests on concrete		1	
	6	Durability of concrete, laboratory tests on concrete		2	
III	1	Pozzolana and Admixtures	Concrete technology by MS shetty	1	Total Lectures for Unit III: 8
	2	Plasticizer, retarders		1	
	3	Accelerators, water proofing agents,		1	
	4	Mineral admixtures, IS code provisions.		1	
	5	Concreting techniques: Guniting, grouting and shotcreting concrete, introduction & application of Ferrocement.		1	
	6	Concrete curing compounds		1	
	7	Bond aid for plastering,		2	
IV	1	Special concrete	Concrete technology by MS shetty	1	Total Lectures for Unit IV: 8
	2	Light weight concrete		2	
	3	Fibre reinforced concrete		1	
	4	Roller compacted concrete, selfcompacted concrete,		1	
	5	Concreting techniques: Guniting		1	
	6	Grouting and shotcreting concrete, introduction & application of Ferrocement.		2	
	1	Introduction of mix design,	Concrete technology by MS shetty	1	Total Lectures
	2	Factors governing mix design		1	

V	3	IS code method of mix design (IS:10262 – 1982) and ACI method.		2	for Unit V: 6
	4	IS code method of mix design (IS:10262 – 1982) and ACI method.		2	
VI	1	Basic elastic theory and concept of reinforced concrete,	Concrete technology by MS shetty	1	Total Lectures for Unit VI: 8
	2	Types of reinforcement,		2	
	3	Analysis of rectangular sections by working stress method		1	
	4	Modes of failure		1	
	5	Design of singly reinforced beams		1	
	6	One-way slabs		2	
			Total Lectures Required	**42**	

Department of Civil Engineering
Semester – VII (Session 2020-2021)
Subject: 4CE05 - STRUCTURAL ANALYSIS- I
SUBJECT TEACHER: Dr. N. P. Kataria

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Classification of Structures, Concept of statically indeterminate Structures, Analysis of fixed beam and propped cantilever, Rotation and sinking of support.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit I: 8
	2	Analysis of Continuous beam by theorem of three moments, sinking of support.		4	
II	1	Castigliano's theorem I, Unit load method, slope and deflection in determinate beams and portals.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit II: 8
	2	Deflection in determinate trusses.		4	
III	1	Influence line diagrams for reactions, bending moment and shear force for determinate beams.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit III: 8
	2	Rolling loads on simply supported beams concentrated and uniformly distributed loads, maximum shear force and bending moment, focal length.		4	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
IV	1	Analysis of Cables Suspension Bridge under Concentrated Load and UDL for Cables over pulleys and Cable provided with saddles.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit IV: 8
	2	Two & Three hinged arches subjected to static loads, Bending moment, radial shear and axial thrust.		4	
V	1	Slope deflection method: Analysis of continuous beams with and without sinking of support.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit V: 8
	2	Slope deflection method: Analysis of portal frames without side sway.		4	
VI	1	Moment Distribution method: Analysis of continuous beams with and without sinking of support.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit VI: 8
	2	Moment Distribution method:Analysis of portal frames without side sway.		4	
			Total Lectures Required	**48**	

Department of Civil Engineering					
Semester – VII (Session 2020-2021)					
Subject: Theory of Structure II					
SUBJECT TEACHER: Dr. N. P. Kataria					
Unit No.	**Topic No.**	**Topic with detail course outlines**	**Text and References**	**No. of Periods Allotted**	**Remark**
I	1	Moment distribution method, application to portal frames with sway. Multibay, multistoried, symmetrical frames subjected to symmetric loads only.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit I: 8
	2	Slope deflection method: Application to portal frames with side sway.		4	
II	1	Kani's method: Continuous beams and single bay single storey portal frames with side sway.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit II: 8
	2	Multi- bay, multi storeyed frames subjected to symmetric loads.		4	

Unit	Topic	Topic with detail course outlines	Text and References	No. of Lectures	Total Lectures
III	1	Castigliano's second theorem, principle of least work, Analysis of redundant frames. (up to two degree redundancy).	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit III: 8
	2	Analysis of redundant trusses (up to second degree of redundancy), lack of fit, temperature effect.		4	
IV	1	Maxwell's reciprocal theorem, Betty's theorem, Muller - Breslau's principle, Influence line diagrams for continuous beams, upto two span only.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	4	Total Lectures for Unit IV: 8
	2	Tension coefficient method & its applications to simple space trusses.		4	
V	1	Flexibility method, static redundancy, flexibility coefficients, compatibility condition application to beams.	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	3	Total Lectures for Unit V: 8
	2	Introduction to plastic analysis of steel structure, shape factor, plastic section modulus, Redistribution of moment, upper and lower bound theorems, collapse loads for beams, single bay, single storey portals.		5	
VI	1	Stiffness method, kinematic redundancy, stiffness coefficients, direct stiffness approach,	Structural Analysis (Volume I,II) S.S. Bhavikatti, Theory of Structure (Volume I, II) S. Ramamuttam	2	Total Lectures for Unit VI: 8
	2	application to continuous beams and single - bay, single - storey portal.		6	
		Total Lectures Required			**48**

		Department of Civil Engineering			
		Semester – IV (Session 2020-2021)			
		Subject: Surveying			
		SUBJECT TEACHER: Prof. S.D.Malkkhede			
Unit No.	**Topic No.**	**Topic with detail course outlines**	**Text and References**	**No. of Periods Allotted**	**Remark**
I	1	Introduction: Geo-informatics- definition, disciplines covered, importance. Field Surveying Methods	B.C. Punmia : Surveying I & II.	1	Total Lectures for Unit I: 6
	2	Definition & objectives; concept of Geoids and reference spheroids, coordinate systems, plane and geodetic surveys		1	
	3	Location of a point- classification of surveys; principles of surveying Errors in measurements		1	
	4	Sources, types of errors and their treatment		1	
	5	Random error distribution, accuracy, precision and uncertainty. Surveying instruments temporary and permanent adjustment concept, principle of reversal. Maps- types, importance, scales/CI		1	
	6	Conventional symbols, and generalization; topographic maps projection systems, sheet numbering systems, map layout.		1	
	1	Direct and indirect methods		1	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
II	2	Chain and tape measurement	**B.C. Punmia : Surveying I & II.**	1	Total Lectures for Unit II: 6
	3	Corrections to tape measurements		1	
	4	Optical methods- tachometers, sub tense bar;		1	
	5	Optical methods- tachometers, sub tense bar;		1	
	6	Electronic methods- EDMs, total stations		1	
III	1	Various terms; Methods of height determination; Spirit leveling.	. **B.C. Punmia : Surveying I & II.**	1	Total Lectures for Unit III: 6
	2	Different types of levels and staves;		1	
	3	Booking and reduction of data		1	
	4	Classification and permissible closing error;		1	
	5	Profile leveling and cross sectioning		1	
	6	Curvature & refraction and collimation errors; reciprocal leveling		1	
IV	1	Bearings and angles	**B.C. Punmia : Surveying I & II..**	1	Total Lectures for Unit IV: 6
	2	Compass surveying		1	
	3	Magnetic bearings		1	
	4	Declination		1	
	5	Local attraction errors and adjustments.		1	
	6	Local attraction errors and adjustments.		1	
V	1	Purpose and classification of each; Compass and theodolite traversesx, , omitted measurements.	**B.C. Punmia : Surveying I & II.**	1	Total Lectures for Unit V: 6
	2	Local attraction errors and adjustments.		1	
	3	Methods of observation and booking of data,		1	
	4	Methods of observation and booking of data,		1	
	5	Balancing of traverses, computation of coordinates		1	
	6	Gale's traverse table		1	
VI	1	Merits and demerits, accessories;	**B.C. Punmia : Surveying I & II..**	1	Total Lectures for Unit VI: 6
	2	Orientation and resection		1	
	3	Methods of plane tabling;		1	
	4	Methods of plane tabling		1	
	5	Engineering project surveys requirements		1	
	6	Engineering project surveys requirements		1	
			Total Lectures Required	**36**	

Department of Civil Engineering					
Semester – IV (Session 2020-2021)					
Subject: Geotechnical Engineering - I					
SUBJECT TEACHER: Prof. R. V. Langote					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	History of development of soil mechanics, formation of soil, its significance to the field problems	Soil Mechanics and Foundation Engineering - Dr. K. R Arora	1	Total Lectures for Unit I: **8**
	2	Soil properties and its classification		1	
	3	Definition of soil, soil as a three phase system, weight – volume relationship		1	

	4	Index properties of coarse and fine grained soil	Soil Mechanics and Foundations – Prof. B. C. Punmia	1	
	5	BIS classification of fine grained & coarse grained soil		1	
	6	Numericals		3	
II	1	Concept of clay mineral, major soil minerals, their structural formation and properties	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit II: **6**
	2	Mechanics of compaction, factors affecting compaction, different structures of soil		1	
	3	Standard and modified Proctor test, their field Determination, zero air void line, concept of wet of optimum, and dry of optimum		1	
	4	Field compaction & their control. CBR test and CBR value for soak and unsoaked conditions.		1	
	5	Numericals		2	
III	1	Concept of absorbed water, surface tension	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit III: **7**
	2	Capillarity and its effect on Soil properties permeability of soil		1	
	3	Darcy's law and validity, Discharge and seepage velocity, factors affecting Permeability		1	
	4	Determination of coefficient of permeability laboratory and field methods.		1	
	5	Permeability for stratified deposits, Drainage and Dewatering Methods		1	
	6	Numericals		2	
IV	1	Laplace equation, its derivation in Cartesian co-ordinate system, its application for the computation of discharge seepage	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit IV: **8**
	2	Seepage pressure, Quick sand condition with numericals		1	
	3	Concepts flow net, method to draw flow nets, characteristics and use of flow net		1	
	4	Preliminary problem of discharge, estimation of discharge through homogenous earthen embankment		1	
	5	Design Terzaghi's criteria for graded filter, concept of piping and criteria of stability against piping		2	
	6	Numericals		2	
V	1	A physical concept of shear strength, Introduction of Mohr's stress diagram	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit V: **7**
	2	Mohr's failure criteria, Mohr- Coulomb's theory and development of failure envelopes		1	
	3	Unconfined compression test, Laboratory measurement of shear strength for different drainage, conditions by direct shear test		1	
	4	Triaxial test for various drainage conditions Merits and demerits of various shear strength tests.		1	
	5	Concept of pore pressure coefficient shear characteristics of sand, NC and OC clays and partially saturated soil		1	
	6	Numericals		2	
VI	1	State of stress at a point, stress distribution in soil mass		1	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
	2	Boussinesq's theory and its applications, point load, uniformly loaded rectangular and circular area	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit VI: **6**
	3	New-mark's chart, its preparation and use, equivalent point load Compression of laterally confined soil, concept of consolidation spring analogy		1	
	4	Terzaghi's theory of one dimensional consolidation		1	
	5	Determination of Cv Cassagrande's method for determination of pre-consolidation pressure.		1	
	6	Numericals		1	
Total Lectures Required				**42**	

Department of Civil Engineering
Semester – V (Session 2020-2021)
Subject: Surveying II
SUBJECT TEACHER: Prof. R. V. Langote

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to Tacheometry Survey	Surveying & Levelling, Part I&II- T.P. Kanetkar& Kulkarni, Surveying I&II – B.C. Punmia, Surveying & Levelling – N.N. Basak	1	Total Lectures for Unit I: 8
	2	Methods of Tachometric Survey- Stadia Method, Fixed Hair and Movable hair Method and Tangential method of tachometry		2	
	3	Formulas for distances calculation		1	
	4	Theory and Derrivation of Anallatic lenses		1	
	5	Beamans Stadia Arc and other Methods		1	
	6	Auto reduction tacheometer such as jeffcot hammer and other methods		2	
II	1	Introduction and classification of curves	Surveying & Levelling, PartI&II- T.P. Kanetkar & Kulkarni, Surveying I&II – B.C. Punmia, Surveying & Levelling – N.N. Basak	1	Total Lectures for Unit II: 8
	2	Degree of curve, Elements of simple Circular curve and Compound Curve		1	
	3	Theory and Methods of Setting out Simple Circular Curve		2	
	4	Instrumental Method of setting out Compound Curve		1	
	5	Vertical Curves, Their Types and setting out method of vertical Curve		1	
	6	Ideal Transition Curve, Characteristics and Requirement of Transition Curve. Methods of determination of length, Elements of different types of transition curve.		2	
	1	Triangulation : Principles, classification of triangulation system, Triangulation figures, their choice of station	Surveying & Levelling, Part I&II-	1	

III	2	Tower, Signal & phase of signals	T.P. Kanetkar& Kulkarni, Surveying I&II – B.C. Punmia, Surveying & Levelling – N.N. Basak	1	Total Lectures for Unit III: 8	
	3	Reconnaissance, Intervisibility, Angular measurements.		1		
	4	Base line and its measurements. Basenet & it's extension		1		
	5	Adjustment of field Observation, Errors in Observation, Method of leas		2		
	6	Weighted observations, Figure adjustment (Triangle only)		2		

IV	1	Hydrographic surveying: Necessity & Controls	Surveying & Levelling, Part I&II- T.P. Kanetkar& Kulkarni, Surveying I&II	1	Total Lectures for Unit IV: 6	
	2	Shore line Surveys, gauges, Sounding equipment's and Procedure of taking sounding		1		
	3	Analytical and graphical methods: Station pointer		2		
	4	Introduction to Underground Survey Correlation of surface and underground surveys; Weisbach triangle, transferring surface level to undergoround.		2		

V	1	Introduction and technical terms in Photogrammetry	Surveying & Levelling, Part I&II- T.P. Kanetkar& Kulkarni, Surveying I&II – B.C. Punmia,	1	Total Lectures for Unit V: 6	
	2	Flight planning and height from parallel measurement		2		
	3	Relief, relief displacement, Number of Photographs required and their Numericals		2		
	4	Introduction and Application of Remote Sensing		1		

VI	1	Field Astronomy: Elements of spherical trigonometry	Surveying & Levelling, Part I&II- T.P. Kanetkar& Kulkarni, Surveying I&II – B.C. Punmia,	1	Total Lectures for Unit VI: 6	
	2	Napier's rules of circular parts, celestial sphere, astronomical terms, Astronomical triangle, co-ordinate systems.		2		
	3	GIS & GPS: Components of geographical information System		1		
	4	Advantages, function of GIS, advantages and disadvantages, Global po		1		
	5	GPS), introduction, definitions, GPS receivers, antenna, advantages of		1		
		Total Lectures Required		**42**		

Department of Civil Engineering					
Semester – VII (Session 2020-2021)					
Subject: Geotechnical Engineering – II					
SUBJECT TEACHER: Prof. R. V. Langote					
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Field exploration, objectives and methods of exploration	Soil Mechanics and Foundation Engineering - Dr. K. R Arora	1	Total Lectures for Unit I: **7**
	2	Planning of exploration programme soil boring, Introduction to methods of soil exploration		1	
	3	SPT test, field vane shear test		1	

	4	Geophysical methods, electrical resistivity and soil refraction methods	Soil Mechanics and Foundations – Prof. B. C. Punmia	1	
	5	Soil log bore presentation and interpretation exploration data. Ground improvement techniques		1	
	6	Numericals		2	
II	1	Bearing capacity and concept of local and general shear failure	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit II: **8**
	2	Terzaghi's and Skempton's Theory of BC		1	
	3	Meyerhof's and BIS method for bearing capacity		1	
	4	Determination bearing capacity of granular soils based on SPT value		1	
	5	Plate load test, Static Cone Penetrometer (In Situ methods for bearing capacity)		1	
	6	Pressure meter test contact pressure distribution diagram below the base of footing, Concept of raft foundation and floating foundation		1	
	7	Numericals		2	
III	1	Earth pressure at rest, general & local Stages of plastic equilibrium, Rankine's and coulomb's theory of active and passive earth pressure on retaining wall	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit III: **8**
	2	Influence of surcharge, water table, wall friction		1	
	3	Rebhann's and Culmann's simple graphical methods		1	
	4	Introduction to sheet pile and bulkhead and their classifications		1	
	5	(No design criteria) Cofferdam purpose, various types and their suitability.		1	
	6	Numericals		3	
IV	1	Classification of piles and their uses	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit IV: **8**
	2	Static analysis along with numericals		2	
	3	Dynamic analysis along with numericals		2	
	4	Piles in group and their capacity, group efficiency, factors affecting group efficiency		1	
	5	Behaviour of group of pile in sandy and in clayey soil, pile load test, effect of pile cap		1	
	6	Criteria for spacing and depth of piles. IS design criterion for undereamed Pile in clay and sands		1	
V	1	Immediate, primary and secondary settlement for footing resting on homogenous isotropic, cohesive and cohesion less soils related to single footing, combined footing, & raft foundation etc	Soil Mechanics and Foundation Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	Total Lectures for Unit V: **6**
	2	Concept of differential settlement factors and causes for differential settlement, BIS requirement for total as well as differential settlement		1	
	3	Proportioning of footing for uniform settlement		1	
	4	Computation of total and differential settlement of a single pile and group of piles in sandy and clayey soil.		1	
	5	Numericals		2	
VI	1	Component & their function, sinking of well, types of force system, and their computation	Soil Mechanics and Foundation	1	Total Lectures
	2	Design criteria for various components of wells		1	

	3	Tilting and shifting, Bearing capacity of well as per BIS.	Engineering - Dr. K. R Arora Soil Mechanics and Foundations – Prof. B. C. Punmia	1	for Unit VI: **7**
	4	Stability analysis of infinite and finite slope, causes of failure of slopes		1	
	5	Stability analysis of infinite and finite slope in cohesive and non-cohesive soils		1	
	6	Numericals		2	
Total Lectures Required				**44**	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Lesson Plan (Session 2020-21)

Course Number and Title: -
Name of Faculty: -
Semester: -VII

Real Time Embedded System (7IT04)
Prof. A. A. Gulhane
Section: - A

Lecture No.	Planned Dates	Topic Name	Total hours
		Unit-1	
1	17-08-2020	Discussion on Vision, Mission, CLO, PEO, Syllabus, Graduate Attributes, Objective of Subject	
2	18-08-2020	Introduction to embedded systems	
3	20-08-2020	Processor in the system, types of processor	
4	21-08-2020	Hardware units required in the exemplary cases	
5	24-08-2020	Software embedded into a system. Final Machine implement able software for a product	
6	25-08-2020	Software in Processor specific assembly language and high level language	8
7	27-08-2020	Device drivers device management using an operating systems	
8	28-08-2020	Software design for scheduling multiple tasks and devices using RTOS	
9	31-08-2020	Embedded SoC and in VLSI circuits.	
		Unit-2	
10	01-09-2020	Structural units of the processor	
11	03-09-2020	Allocation of memory to program segment and blocks	
12	04-09-2020	Memory map of the system	
13	07-09-2020	Memory blocks for different data sets and structures	
14	08-09-2020	Serial communication using I2C, CAN and advanced I/O buses between the networked multiple devices	8
15	10-09-2020	Device drivers, Virtual Devices,	
16	11-09-2020	Device drivers for parallel port, serial and timing devices	
17	14-09-2020	Context and periods for context switching, deadline and interrupt latency	

Lecture No.	Planned Dates	Topic Name	Total hours
		Unit-3	
18	15-09-2020	Software programming in assembly language and C	
19	17-09-2020	Program Elements: Use of data structures Queues, Stacks, Lists and Trees	
20	18-09-2020	Use of data structures Function pointers, Function queues and ISR queues	
21	21-09-2020	Queues for implementing protocol for a network, Queuing of functions on interrupts	8
22	22-09-2020	Use of FIPO queues, Stacks,	
23	24-09-2020	Lists and Ordered Lists	
24	25-09-2020	Embedded Programming in C++	
25	28-09-2020	Embedded Programming in Java	
		Unit-4	
26	29-09-2020	Modeling process, Use of dataflow & control data flow graphs,	
27	01-10-2020	Programming model for event controlled or response time constraint, Real time programs,	
28	02-10-2020	use of finite states machine model	
29	05-10-2020	finite states machine model-timer, c function	7
30	06-10-2020	Petri net Model	
31	08-10-2020	Modeling of Multiprocessor systems	
32	09-10-2020	IPC and Synchronization: Multiple processes in an application: Process, Tasks, Threads, Sharing data by multiple tasks	
		Unit-5	
33	12-10-2020	Use of Semaphores for a task or for Critical section of code,	
34	13-10-2020	Mutex & P & V semaphores	
35	15-10-2020	Priority inversion problems & Deadlock situations	
36	16-10-2020	IPC issues: Use of signals, Use of Semaphore flags	
37	19-10-2020	Use of Mutex as resource key,	8
38	20-10-2020	Use of message queues,	
39	22-10-2020	Mailboxes, pipes,	
40	23-10-2020	Virtual sockets, RPCs	

Unit-6

41	26-10-2020	Introduction to RTOS, OS Services, RTOS Services,	
42	27-10-2020	Schedule management for multiple tasks in Real Time, Handling of interrupt source call	
43	29-10-2020	RTOS task scheduling models, Cooperative Round Robin Scheduling using a Circular Queue of ready tasks	
44	30-10-2020	Using an Ordered list as per precedence constraints, Cycling scheduling in Time Slicing	7
45	02-11-2020	Preemptive scheduling, Critical section service by preemptive scheduler,	
46	03-11-2020	Fixed Real Time scheduling, Precedence assignment in Scheduling algorithms.	
47	05-11-2020	Performance metrics, IEEE Standard POSIX 1003.1B,	
48	06-11-2020	Fifteen-point' strategy for Synchronization,	

Faculty: -   Prof. A. A. Gulhane

Head
Deptt. HOD Information Technology;
(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Bac_____
Department of Information Technology
Teaching Plan: Session 2020-21

Course Name & Code: Analog & Digital Electronics [3IT05]
Name of Faculty: Prof. Avinash G. Mahalle
Year & Semester: Second Year III [A]

Lecture No.	Planned Dates	Topics to be covered	Total Hours
1	18-08-2020	Vision & Mission of Institute, Vision & Mission of Dept. Graduate Attributes, COs & CLOs, Grading Scheme, Text books & reference books, Syllabus	01
		UNIT-1	
2	20-08-2020	Semiconductor Basics	08
3	25-08-2020	Transistors Basics	
4	27-08-2020	Transistor as an amplifier	
5	29-08-2020	Need of biasing	
6	02-09-2020	Potential divider bias circuit	
7	03-09-2020	Faithful amplification of CE amplifier	
8	05-09-2020	Transistor as an electronic switch,	
9	08-09-2020	Construction and working of JFET	
		UNIT-2	
10	09-09-2020	Basics of Operational Amplifier	08
11	10-09-2020	Block diagram of operational amplifier	
12	12-09-2020	Ideal operational amplifier parameters	
13	15-09-2020	Inverting Amplifier	
14	16-09-2020	Non-Inverting Amplifier, Voltage follower	
15	19-09-2020	Summing Amplifier	
16	22-09-2020	Subtractor	
17	23-09-2020	Comparator	
		UNIT-3	
18	24-09-2020	Basics of Oscillator, Barkhausen Criterion	07
19	26-09-2020	RC Phase Shift Oscillator	
20	29-09-2020	Transistor crystal oscillator	
21	30-09-2020	Block diagram of Timer IC 555	
22	01-10-2020	Astable Multivibrator	
23	03-10-2020	Monostable Multivibrator	
24	06-10-2020	Solved Problems	

Lecture No.	Planned Dates	Topic to be covered	Total Hours
		UNIT-4	
			08
25	07-10-2020	Logic Gates	
26	08-10-2020	Standard logic expression forms: SOP & POS	
27	10-10-2020	Logic expression realization & minimization using K-map	
28	13-10-2020	Two variable K-map	
29	14-10-2020	Three variable K-map	
30	15-10-2020	Four variable K-map	
31	17-10-2020	Half Adder, Full Adder	
32	20-10-2020	Half subtractor, Full subtractor	
		UNIT-5	
			08
33	21-10-2020	Difference between Combinational and Sequential circuits	
34	22-10-2020	Code convertors (BCD, Excess-3 and Gray)	
35	24-10-2020	Multiplexers	
36	27-10-2020	De-multiplexers	
37	28-10-2020	Decoders	
38	29-10-2020	SR flip-flop	
39	31-10-2020	JK flip-flop	
40	03-11-2020	D flip-flop & T flip-flop	
		UNIT-6	
			08
41	04-11-2020	Difference between Asynchronous and Synchronous sequential circuits	
42	05-11-2020	Asynchronous Counters	
43	07-11-2020	Up-Counter	
44	24-11-2020	Down-Counter	
45	25-11-2020	Mod Counter	
46	26-11-2020	Working of Shift Registers, SISO	
47	28-11-2020	SIPO, PISO and PIPO	
48	01-12-2020	Application of Shift Register as a Ring Counter	
		Total Lectures Planned	48

Prof. A. G. Mahalle

Head
Dr. P. M. Ingole Technology,
P.R.M.I.T & R, Badnera-Amravati
HODIT

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Information Technology

Session:2020-21

Course Number and Title: -   Discrete Structure & Graph Theory (3IT02)

Name of Faculty: -Dr. A. S. Alvi   Semester:-IIIrd Sem

Lecture No.	Planned Dates	Topic Name	Total hours
		Unit-1	
1	18-Aug-2020	Statements & Notation	10
2	20-Aug-2020	Connectives	
3	21-Aug-2020	Normal forms	
4	25-Aug-2020	Equivalences	
5	27-Aug-2020	Principal of DNF	
6	28-Aug-2020	Principal of CNF &	
7	29-Aug-2020	Inference Rule	
8	03-Sep-2020	The theory of inference for the statement calculus	
9	04-Sep-2020	Predicate calculus and Problems	
10	05-Sep-2020	The Theory of the Predicate calculus	
		Unit-II	
11	08-Sep-2020	Basic concepts of Set Theory	7
12	10-Sep-2020	Representation of Discrete Structure	
13	11-Sep-2020	Relation	
14	12-Sep-2020	Ordering of Set	
15	15-Sep-2020	Functions , Recursion	
16	17-Sep-2020	Recursive function.	
17	18-Sep-2020	Sets & Predicates	
		Unit-III	
18	19-Sep-2020	Algebraic Systems	7
19	22-Sep-2020	Semi groups	
20	24-Sep-2020	Monoids	
21	25-Sep-2020	Grammars& Languages	
22	26-Sep-2020	Polish expression	
23	29-Sep-2020	Polish expression & their compilation	
24	01-Oct-2020	Application of Residue Arithmetic to Computers.	

Course Number and Title: –COMPUTER ARCHITECTURE AND ORGANIZATION (5IT03)

Name of Faculty: -   Prof. A. W. Burange

Semester: -   V

Section :- A

Sr No.	Planned Date	Topic Name	Total hours
		UNIT-I	
1	17/8/20	Introduction to Basic strucutre of computer	9
2	18/8/20	Basic strucutre of computer: Hardware & software	
3	19/8/20	Addressing methods	
4	20/8/20	Program sequencing	
5	21/8/20	concept of memory locations & address	
6	24/8/20	Main memory operation	
7	25/8/20	Instructions & instruction sequencing	
8	27/8/20	Addressing modes	
9	28/8/20	Basic I/O operations, Queues & subroutines	
		UNIT-II	
10	31/8/20	Introduction to Processing Unit: Fundamental concepts	8
11	1/9/20	Execution of a complete instruction	
12	2/9/20	Hardwired control	
13	3/9/20	Performance consideration	
14	4/9/20	Microprogrammed control	
15	7/9/20	Microinstructions, microprogram sequencing	
16	9/9/20	Microinstruction prefetching	
17	10/9/20	Emulation	
		UNIT III	
18	11/9/20	Introduction to I/O organization	9
19	14/9/20	accessing I/O devices	
20	15/9/20	Introduction and study of interrupts	
21	16/9/20	direct memory access : bus arbitration	
22	18/9/20	I/O hardware introduction	
23	21/9/20	processor bus and interfacing circuits	
24	22/9/20	standard I/O interfaces fundamentals	
25	23/9/20	SCSI bus	
26	24/9/20	backplane bus standard	
		UNIT IV	
27	25/9/20	Memory Unit: basic concepts	10
28	28/9/20	semiconductor RAM memories	
29	29/9/20	IP security architecture	
30	30/9/20	Web Security: Web security requirements	
31	1/10/20	internal organization of memory	
32	5/10/20	Static & dynamic RAMs,ROMs	
33	6/10/20	speed, size & cost considerations	

34	7/10/20	Cache memories: performance considerations	
35	8/10/20	Virtual memories, address translation	
36	9/10/20	Memory management requirements	

		UNIT-V	
37	19/10/20	Arithmetic number representation	
38	20/10/20	Arithmetic number representation	
39	21/10/20	design of fast adders	
40	22/10/20	signed addition and subtraction	
41	23/10/20	Multiplication of positive numbers	8
42	26/10/20	Booths' algorithm	
43	27/10/20	Integer division.	
44	28/10/20	Floating-point numbers and related operations.	

		UNIT-VI	
45	29/10/20	Introduction to Computer Peripherals	
46	2/11/20	Computer Peripherals: Input-output devices like video displays, video terminals	
47	3/11/20	graphics input devices and printers	
48	4/11/20	Introduction to Online storage devices	6
49	5/11/20	Online storage devices: magnetic disks	
50	6/11/20	magnetic tape systems, CD-ROM systems, Communication devices : Modems	

Faculty: -   Prof. A.W. Burange

Head
Deptt. HOD Information Technology
(Information Technology)
P.R.M.I.T&R Amravati.

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-2021)

Course Number and Title: - Digital Integrated Circuits (5IT02)
Name of Faculty: -   Prof. G.K.Wadnere
Semester: -   V   **Section:** - B

Lecture No.	Planned Dates	Topic Name	Total Hours
		Unit 1	
1	17/08/2020	Introduction to Vision, Mission, CO & CLO, Graduate Attributes	
2	18/08/2020	Review of Boolean Algebra	
3	19/08/2020	Boolean Functions & Logic Families: Canonical & Standard Forms	
4	20/08/2020	Digital Logic Gates	
5	21/08/2020	Digital Integrated Circuits: Special Characteristics like	9
6	24/08/2020	Bipolar Transistor Characteristics	
8	25/08/2020	TTL, ECL	
9	27/08/2020	MOS & CMOS families: Basic characteristics	
10	28/08/2020	Operation and typical characteristics	
		Unit 2	
11	31/08/2020	Simplification of Boolean functions: The K-Map method, Two Variable, Three Variable	
12	02/09/2020	Four Variable K-Map	
13	03/09/2020	Five Variable K-Map	
14	04/09/2020	Examples of K-Map	9
15	07/09/2020	Implementation using logic gates	
16	08/09/2020	Tabulation Method	
17	09/09/2020	Tabulation Method	
18	10/09/2020	Determination of Prime Implicants.	
19	11/09/2020	Selection of Prime Implicants	
		Unit 3	
20	14/09/2020	Combinational Logic: Introduction	
21	15/09/2020	Design Procedure	
22	16/09/2020	Adders	
23	18/09/2020	Subtractor	
24	21/09/2020	code Converters	
25	22/09/2020	Code Converters	11
26	23/09/2020	Analysis Procedure for Combinational Circuits	
27	24/09/2020	Multilevel NAND Circuits	
28	25/09/2020	Multilevel NOR Circuits	
29	28/09/2020	Exclusive-OR function: Odd function	
30	29/09/2020	Parity generation & Checking.	
		Unit 4	
31	30/09/2020	MSI & PLD Components: Introduction	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Teaching Plan (Session 2020-21)

Course Number and Title: -COMPUTER ARCHITECTURE AND ORGANIZATION (5IT03)

Name of Faculty: - Prof. H.D.Kale

Semester: - V

Section :- A

Sr No.	Planned Date	Topic Name	Total hours
		UNIT-I	
1	17/08/2020	Introduction to Basic strucutre of computer	
2	18/08/2020	Basic strucutre of computer: Hardware & software	
3	19/08/2020	Addressing methods	
4	20/08/2020	Program sequencing	
5	21/08/2020	concept of memory locations & address	
6	24/08/2020	Main memory operation	10
7	25/08/2020	Instructions & instruction sequencing	
8	27/08/2020	Addressing modes	
9	28/08/2020	Basic I/O operations, Queues & subroutines	
10	31/08/2020	Revision UNIT-I	
		UNIT-II	
11	02/09/2020	Introduction to Processing Unit: Fundamental concepts	9
12	03/09/2020	Execution of a complete instruction	
13	04/09/2020	Hardwired control	
14	07/09/2020	Performance consideration	
15	08/09/2020	Microprogrammed control	
16	09/09/2020	Microinstructions, microprogram sequencing	
17	10/09/2020	Microinstruction prefetching	
19	11/09/2020	Emulation	

19	14/09/2020	Revision UNIT-II	
UNIT III			
20	15/09/2020	Introduction to I/O organization	
21	16/09/2020	accessing I/O devices	
22	18/09/2020	Introduction and study of interrupts	
23	21/09/2020	direct memory access : bus arbitration	
24	22/09/2020	I/O hardware introduction	10
25	23/09/2020	processor bus and interfacing circuits	
26	24/09/2020	standard I/O interfaces fundamentals	
27	25/09/2020	SCSI bus	
28	28/09/2020	backplane bus standard	
29	29/09/2020	Revision UNIT-III	
UNIT IV			
30	30/09/2020	Memory Unit: basic concepts	
31	01/10/2020	semiconductor RAM memories	
32	05/10/2020	IP security architecture	
33	06/10/2020	Web Security: Web security requirements	
34	07/10/2020	internal organization of memory	
35	08/10/2020	Static & dynamic RAMs,ROMs	11
36	09/10/2020	speed, size & cost considerations	
37	12/10/2020	Cache memories: performance considerations	
38	13/10/2020	Virtual memories, address translation	
39	14/10/2020	Memory management requirements	
40	19/10/2020	Revision UNIT-IV	
UNIT-V			
41	20/10/2020	Arithmetic number representation	9
42	21/10/2020	Arithmetic number representation	

43	22/10/2020	design of fast adders	
44	23/10/2020	signed addition and subtraction	
45	26/10/2020	Multiplication of positive numbers	
46	27/10/2020	Booths' algorithm	
47	28/10/2020	Integer division.	
48	29/10/2020	Floating-point numbers and related operations.	
49	01/11/2020	Revision UNIT-V	
UNIT-VI			
50	02/11/2020	Introduction to Computer Peripherals	
51	03/11/2020	Computer Peripherals: Input-output devices like video displays, video terminals	
52	04/11/2020	graphics input devices and printers	
53	05/11/2020	Introduction to Online storage devices	9
54	23/11/1900	Online storage devices: magnetic disks	
55	24/11/2020	magnetic tape systems	
56	25/11/2020	CD-ROM systems	
57	26/11/2020	Communication devices : Modems	
58	01/12/2020	Revision UNIT-VI	
59	02/12/2020	GATE Questionnaire	Content beyond syllabus
60	03/12/2020		

Faculty: - Prof. H.D.Kale

Head
Deptt. of Information Technology
(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
<u>Teaching Plan: Session 2020-21</u>

Course Name & Code: Object Oriented Programming (3IT03)
Name of Faculty: Prof. Harshal D. Misalkar
Year & Semester: Second Year III SEM [Sec-A]

Lecture No.	Planned Dates	Topics to be covered	Total Hours
1	17-08-2020	Vision & Mission of Institute, Vision & Mission of Dept. PEOs, POs and PSOs, CLOs and COs, Grading Scheme, Text Books & Reference Books, Syllabus	01

UNIT-1

Lecture No.	Planned Dates	Topics to be covered	Total Hours
2	18-08-2020	Unit I: Introduction to Object Oriented Programming:	
3	20-08-2020	Introduction, Need of OOP	
4	21-08-2020	Principles of Object-Oriented Languages	
5	24-08-2020	Procedural Language Vs OOP, Application of OOP	
6	25-08-2020	Java Compiler, Java Virtual Machine	
7	27-08-2020	Java features, Program Structures.	
8	28-08-2020	Programming Constructs: Variables, Primitive data types	12
9	31-08-2020	Identifier, Literals	
10	01-09-2020	Operators in Java, Types	
11	03-09-2020	Expressions, Precedence Rules and Associativity	
12	04-09-2020	Primitive Type Conversion and Casting	
13	07-09-2020	Flow of Control.	

UNIT-II

Lecture No.	Planned Dates	Topics to be covered	Total Hours
14	08-09-2020	Classes and Objects: Classes, Objects	
15	10-09-2020	Creating Objects, Methods	
16	11-09-2020	Constructors	
17	14-09-2020	Cleaning up Unused Objects, Class Variable and Methods	
18	15-09-2020	this keyword	08
19	17-09-2020	Arrays	
20	18-09-2020	Arrays	
21	17-09-2020	Command Line Arguments	

UNIT-III

Lecture No.	Planned Dates	Topics to be covered	Total Hours
22	21-09-2020	Inheritance: Inheritance vs. Aggregation	
23	22-09-2020	Polymorphism, Method Overloading Method Overriding	08
24	24-09-2020	super keyword, final keyword	

25	25-09-2020	Abstract class	
26	28-09-2020	Interfaces	
27	29-09-2020	Packages and Enumeration	
28	01-10-2020	Interface, Packages	
29	05-10-2020	java.lang package, Enum type	

UNIT-IV

30	06-10-2020	Exception: Introduction, Exception handling Techniques	
31	08-10-2020	User-defined exception	
32	09-10-2020	Exception Encapsulation and Enrichment	
33	12-10-2020	Input/Output:	08
34	13-10-2020	The java.io.file Class	
35	16-10-2020	Reading and Writing data	
36	19-10-2020	Randomly Accessing a file	
37	20-10-2020	Reading and Writing Files using I/O Package	

UNIT-V

38	22-10-2020	Applets: Introduction	
39	23-10-2020	Introduction to Applet Class	
40	26-10-2020	Applet structure, Applet Life cycle,	
41	27-10-2020	Common Methods used in displaying the output paint ()	08
42	29-10-2020	update () and repaint ()	
43	02-11-2020	More about applet tag	
44	03-11-2020	getDocumentBase () and getCodeBase() methods	
45	05-11-2020	Applet class Methods	

UNIT-VI

46	06-11-2020	Event Handling: Introduction, Event delegation Model	
47	23-11-2020	java.awt.event, Sources of events	
48	24-11-2020	Event Listeners	
49	26-11-2020	Adapter classes, Inner Classes	
50	27-11-2020	AWT: Introduction, Components and Containers	08
51	01-12-2020	Button, Label, Checkbox, Radio Buttons	
52	03-12-2020	List Boxes, Choice Boxes, Textfield and Textarea	
53	04-12-2020	Container Class, Layouts	
54	07-12-2020	Menu, Scrollbar	
		Total Lectures Planned	54

Prof. H. D. Misalkar

Head
Dr. P. V. Ingole
Dept. of Information Technology
P.R.M.I.T.& R. Badnera-Amravati.
HODIT

		Unit-4	
26	07-10-20	Modeling process, Use of dataflow & control data flow graphs,	
27	08-10-20	Programming model for event controlled or response time constraint, Real time programs,	
28	09-10-20	use of finite states machine model	
29	13-10-20	finite states machine model-timer, c function	7
30	14-10-20	Petri net Model	
31	16-10-20	Modeling of Multiprocessor systems	
32	20-10-20	Inter process Communication and Synchronization Multiple processes in an application: Process, Tasks, Threads, Sharing data by multiple tasks	
		Unit-5	
33	21-10-20	Use of Semaphores for a task or for Critical section of code,	
34	22-10-20	Mutex & P & V semaphores	
35	23-10-20	Priority inversion problems & Deadlock situations	
36	27-10-20	IPC issues Use of signals, Use of Semaphore flags	
37	28-10-20	Use of Mutex as resource key,	8
38	29-10-20	Use of message queues,	
39	03-11-20	Mailboxes, pipes,	
40	04-11-20	Virtual sockets, RPCs	
		Unit-6	
41	05-11-20	Introduction to RTOS, OS Services, RTOS Services,	
42	06-11-20	Schedule management for multiple tasks in Real Time, Handling of interrupt source call	
43	24-11-20	RTOS task scheduling models, Cooperative Round Robin Scheduling using a Circular Queue of ready tasks	
44	25-11-20	Using an Ordered list as per precedence constraints, Cycling scheduling in Time Slicing	9
45	26-11-20	Preemptive scheduling, Critical section service by preemptive scheduler,	
46	27-11-20	Fixed Real Time scheduling, Precedence assignment in Scheduling algorithms	
47	1-12-20	Performance metrics, IEEE Standard POSIX 1003 1B,	
48	2-12-20	Fifteen-point' strategy for Synchronization,	
49	3-12-20	Embedded Linux Kernel	
50	4-12-20	IC Technology	Content beyond Syllabus
51	8-12-20	Issues in Design Technology	

Faculty: - Prof. M. S. Deshmukh

HOD
(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-21)

Course Number and Title: - Real Time Embedded Systems (7IT04)
Name of Faculty: - Prof. M. S. Deshmukh
Semester:- VII Section :- B

Lecture No.	Planned Dates	Topic Name	Total hours
		Unit-1	
1	18-08-20	Discussion on Vision, Mission, CLO, PEO, Syllabus, Graduate Attributes, Objective of Subject	9
2	19-08-20	Introduction to embedded systems	
3	20-08-20	Processor in the system, types of processor	
4	21-08-20	Hardware units required in the exemplary cases	
5	25-08-20	Software embedded into a system Final Machine implement able software for a product	
6	27-08-20	Software in Processor specific assembly language and high level language	
7	28-08-20	Device drivers device management using an operating systems	
8	02-09-20	Software design for scheduling multiple tasks and devices using RTOS	
9	03-09-20	Embedded SoC and in VLSI circuits.	
		Unit-2	
10	04-09-20	Structural units of the processor	8
11	08-09-20	Allocation of memory to program segment and blocks	
12	09-09-20	Memory map of the system	
13	10-09-20	Memory blocks for different data sets and structures	
14	11-09-20	Serial communication using I2C, CAN and advanced I/O buses between the networked multiple devices	
15	15-09-20	Device drivers, Virtual Devices,	
16	16-09-20	Device drivers for parallel port, serial and timing devices	
17	18-09-20	Context and periods for context switching, deadline and interrupt latency	
		Unit-3	
18	22-09-20	Software programming in assembly language and C	8
19	23-09-20	Program Elements: Use of data structures Queues, Stacks, Lists and Trees	
20	24-09-20	Use of data structures Function pointers, Function queues and ISR queues	
21	25-09-20	Queues for implementing protocol for a network, Queuing of functions on interrupts	
22	29-09-20	Use of FIPO queues, Stacks,	
23	30-09-20	Lists and Ordered Lists	
24	01-10-20	Embedded Programming in C++	
25	06-10-20	Embedded Programming in Java	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-21)

Course Number and Title: - Artificial Intelligence and Expert System (7IT05)
Name of Faculty: - Prof. N. S. Band
Semester :- VII   **Section :-** A&B

Lecture No.	Planned Dates	Topic Name	Total hours
		Introduction to Course	
1	17/08/2020	Vision Mission of Institution, Vision Mission of our Department ,Objective of subject, Grading scheme, Text Books and Ref Books, Syllabus and Course Learning Outcomes (CLO),Application and importance of the Subject, Graduate Attributes	01
		Unit-1	
2	18/08/2020	Introduction to Artificial Intelligence, The AI Problems.	
3	19/08/2020	The Underlying Assumption.	
4	21/08/2020	What is an AI Technique,	
5	24/08/2020	Problems, Problem Spaces and Search.	08
6	25/08/2020	Problem Characteristics	
7	28/08/2020	Production Systems	
8	31/08/2020	Production System Characteristics	
9	01/09/2020	Issues in the Design of Search Programs	
		Unit-2	
10	02/09/2020	Heuristic Search Techniques:	
11	04/09/2020	Generate-and-Test.	
12	07/09/2020	Hill Climbing.	
13	08/09/2020	Best-first Search, A* Algorithm	
14	09/09/2020	Problem Reduction, AND-OR Graphs.	08
15	14/09/2020	The AO* Algorithm,	
16	15/09/2020	Constraint Satisfaction.	
17	16/09/2020	Means ends Analysis	
		Unit-3	
18	18/09/2020	Knowledge Representation Issues, Representations and Mappings.	
19	21/09/2020	Approaches to Knowledge Representation,	
20	22/09/2020	Issues in Knowledge Representation, The Frame Problem.	
21	23/09/2020	Predicate Logic: Representing Simple Facts in Logic.	
22	25/09/2020	Representing Instance and ISA Relationships, Computable Functions and Predicates,	08
23	28/09/2020	Resolution, Natural Deduction	
24	29/09/2020	Representing Knowledge Using Rules, Procedural Versus Declarative Knowledge	
25	30/09/2020	Logic Programming Forward Versus Backward Reasoning, Matching, Control Knowledge.	
		Unit-4	
26	05/10/2020	Symbolic Reasoning Under Uncertainty, Introduction to Nonmonotonic Reasoning	07
27	06/10/2020	Logics for Nonmonotonic Reasoning.	

28	07/10/2020	Implementation Issues, Augmenting a Problem-solver.	
29	09/10/2020	Implementation: Depth-first Search, Breadth first Search.	
30	12/10/2020	Statistical Reasoning Probability and Bayes' Theorem.	
31	13/10/2020	Certainty Factors and Rule-based Systems.	
32	14/10/2020	Bayesian Networks, Semantic Nets, Frames.	
Unit-5			
33	16/10/2020	Understanding : What is Understanding	
34	19/10/2020	Understanding as Constraint Satisfaction.	
35	20/10/2020	Natural Language Processing, Syntactic Processing.	
36	21/10/2020	Semantic Analysis, Discourse and Pragmatic Processing.	08
37	23/10/2020	Statistical Natural Language Processing.	
38	26/10/2020	Spell Checking.	
39	2/10/2020	Common Sense Qualitative Physics.	
40	28/10/2020	Common Sense Ontologies.	
Unit-6			
41	02/11/2020	Expert Systems Representing and Using Domain Knowledge:	
42	03/11/2020	Expert System Shells, Explanation.	
43	04/11/2020	Knowledge Acquisition	
44	23/11/2020	**Fuzzy Logic Systems**: Introduction, Crisp Sets, Fuzzy Sets.	08
45	24/11/2020	Some Fuzzy Terminology, Fuzzy Logic Control.	
46	25/11/2020	**Genetic Algorithms**: Significance of the Genetic Operators.	
47	27/11/2021	Termination Parameters.	
48	01/12/2021	Evolving Neural Networks.	

Faculty: -   Prof.N.S.Band

Head
Deptt. of Information Technolog,
P.R.M.I.T.&R. Badnera-Amravati.
HOD
(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-21)

Course Number and Title: - Object Oriented Programming (3IT03)
Name of Faculty: - Prof. P. P. Deshmukh
Semester :- III

Section :- B

Lecture NO.	Planned Dates	Topic Name	Total Hours
		Unit No. I	
1	18/8/2020	Vision, Mission of Institute and Department PEO & PO and PSO of Department	
2	19/8/2020	CLO and CO of subject explanation and discussion	
3	21/8/2020	Introduction to Object Oriented Programming: Introduction, Need of OOP	
4	25/8/2020	Principles of Object-Oriented Languages, Procedural Language Vs OOP, Application of OOP	
5	26/8/2020	Java Virtual Machine, Java features, Program Structures.	11
6	28/8/2020	Java Programming Constructs: Variables, Primitive data types	
7	29/8/2020	Identifier, Literals, Operators	
8	2/9/2020	Expressions, Precedence Rules and Associativity	
9	4/9/2020	Primitive Type Conversion and Casting	
10	5/9/2020	Flow of Control (if, if else, if else if , switch-case)	
11	8/9/2020	Flow of Control (while, do-while , for , break, continue)	
		Unit No. II	
12	9/9/2020	Classes and Objects: Classes, Objects	
13	11/9/2020	Creating Objects, Methods	
14	12/9/202	More on Creating Objects, Methods	
15	15/9/2020	Constructors	
16	16/9/2020	Cleaning up Unused Objects, Class Variable and Methods	9
17	18/9/2020	this keyword	
18	19/9/2020	Arrays (Single dimension)	
19	22/9/2020	Arrays (Multidimensional & passing arrays to method)	
20	23/9/2020	Command Line Arguments	
		Unit No. III	
21	25/9/2020	Introduction to Inheritance	
22	26/9/2020	Inheritance v/s Aggregation	
23	29/9/2020	Polymorphism, Method Overloading	
24	30/9/2020	Method Overriding	
25	3/10/2020	super keyword, final keyword	9
26	6/10/2020	Abstract class	
27	7/10/2020	Interfaces	

28	9/10/2020	Packages and Enumeration: Interface, Packages	
29	10/10/2020	java.lang package, Enum type.	
Unit No. IV			
30	13/10/2020	Exception: Introduction	
31	14/10/2020	Exception handling Techniques	
32	16/10/2020	User-defined exception	
33	17/10/2020	Exception Encapsulation and Enrichment	8
34	20/10/2020	Input/Output: The java.io.file Class	
35	21/10/2020	Reading and Writing data	
36	23/10/2020	Randomly Accessing a file	
37	24/10/2020	Reading and Writing Files using I/O Package	
Unit No. V			
38	27/10/2020	Applets: Introduction, Applet Class	
39	28/10/2020	Applet structure, Applet Life cycle,	
40	31/10/2020	Common Methods used in displaying the output paint ()	
41	3/11/2020	update () and repaint ()	7
42	4/11/2020	More about applet tag	
43	6/11/2020	getDocumentBase () and getCodeBase() methods	
44	7/11/2020	**Programming Practice**	
Unit No. VI			
45	24/11/2020	Event Handling: Introduction, Event delegation Model	
46	25/11/2020	java.awt.event Description , Sources of events, Event Listeners	
47	27/11/2020	Adapter classes, Inner Classes	
48	28/11/2020	Abstract Window Toolkit: Introduction, Components and Containers	
49	1/12/2020	Button, Label, Checkbox, Radio Buttons	10
50	2/12/2020	List Boxes, Choice Boxes, Textfield and Textarea	
51	4/12/2020	Container Class, Layouts, Menu, Scrollbar	
52	5/12/2020	Container Class, Layouts, Menu, Scrollbar	
53	8/12/2020	Content beyond syllabus	
54	9/12/2020	Content beyond Syllabus	

Subject Teacher

Prof. Pranjali P. Deshmukh

HOD
Head
Deptt. of Information Technology
Department of Information Tech.

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-21)

Course Number and Title: - Object Oriented System Analysis & Design(7IT02)
Name of Faculty: - Prof. P. R. Nerkar
Semester: - VII   Section: -A

Lecture No.	Planned Dates	Topic Name	Total hours
Unit-1			
1.	17/08/2020	Vision and Mission, objective of Subject, CO, Graduate attributes	10
2.	18/08/2020	Modeling Concept: Introduction, Object orientation.	
3.	19/08/2020	OO Development, OO themes.	
4.	20/08/2020	Modeling as a design technique,	
5.	24/08/2020	Class Modeling.	
6.	25/08/2020	Abstraction, The three models.	
7.	27/08/2020	Object and class concepts	
8.	31/08/2020	Link and association concepts.	
9.	01/09/2020	Generalization & Inheritance	
10.	02/09/2020	Navigation of class models.	
Unit-2			
11.	03/09/2020	**Advanced object and class concepts:**	8
12.	07/09/2020	Association Ends, N-ary association.	
13.	08/09/2020	Aggregation, Abstract classes.	
14.	09/09/2020	Multiple inheritances. Metadata, Reification	
15.	10/09/2020	Constraints, Derived data, Packages.	
16.	14/09/2020	State Modeling: Events,	
17.	15/09/2020	States, Transitions and Conditions.	
18.	16/09/2020	State diagrams, State diagram behavior	
Unit-3			
19.	21/09/2020	**Nested state diagram**: Signal Generalization, Nested	8
20.	22/09/2020	Concurrency,	
21.	23/09/2020	Relation of class and state models.	
22.	24/09/2020	Use case model,	
23.	28/09/2020	Sequence models.	
24.	29/09/2020	Activity models, Use case relationships.	
25.	30/09/2020	Procedural sequence model.	
26.	01/10/2020	Special constructs for activity models.	
Unit-4			
27.	05/10/2020	**Development stages:**	7
28.	06/10/2020	Development life cycle.	
29.	07/10/2020	Devising a system concepts, Elaborating a concepts.	
30.	08/10/2020	Preparing a problem statements.	
31.	12/10/2020	Overview of analysis., Domain class models	
32.	13/10/2020	Domain state model.	
33.	14/10/2020	Domain Interaction model.	
Unit-5			
34.	15/10/2020	**Application Analysis:**	8

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Lesson Plan (Session 2020-21)

Course Number and Title: -   Data Communication and Networking (4IT02)

Name of Faculty: -   Prof. A. A. Gulhane

Semester: -IV   Section: - B

Lecture No.	Planned Dates	Topic Name	Total hours
		Unit-1	
1.	02-02-2021	Types of Network; Network Topologies	
2.	03-02-2021	OSI Vs TCP\IP Model	
3.	05-02-2021	Network Devices: Bridge, Switch, Router;	
4.	06-02-2021	Transmission Medium: Guided media, Unguided media;	7
5.	09-02-2021	Time and Frequency Domain,	
6.	10-02-2021	Types of Signals: Analog, Digital, Composite,	
7.	12-02-2021	Periodic, Aperiodic Signal.	
		Unit-2	
8.	13-02-2021	Data conversions: Digital-to-Digital	
9.	16-02-2021	Analog-to-Digital	
10.	17-02-2021	Digital-to-Analog; Configuring DTE-DCE Interface	
11.	20-02-2021	Manchester and Differential Manchester encoding	7
12.	23-02-2021	Shannon Capacity; Multiplexing: FDM	
13.	24-02-2021	WDM, TDM;	
14.	26-02-2021	Multiplexing Application: Mobile Telephone System	
		Unit-3	
15.	27-02-2021	Data Link Layer	
16.	02-03-2021	Design Issues: Services to Network Layer	
17.	03-03-2021	Framing, Flow control	
18.	05-03-2021	Error Control: Parity Bits	
19.	06-03-2021	Hamming Code, Cyclic Redundancy Check (CRC)	8
20.	09-03-2021	Data Link Protocols: Synchronous	
21.	10-03-2021	Asynchronous Protocols, CSMA/CD,	
22.	12-03-2021	WAN Connectivity Protocols: PPP and HDLC	

		Unit-4	
23.	13-03-2021	Addressing and Routing Switching Techniques	
24.	16-03-2021	IPv4 Addressing Scheme	
25.	17-03-2021	IPv6 addressing Overview	
26.	19-03-2021	Subnetting	7
27.	20-03-2021	Evaluating Network Address by router	
28.	23-03-2021	Distance Vector, Link State	
29.	24-03-2021	Ethernet Networks: Token Ring, FDDI.	
		Unit-5	
30.	26-03-2021	Networking and Services Transport Layer Services	
31.	27-03-2021	TCP Protocols	
32.	30-03-2021	UDP Protocols	
33.	31-03-2021	TCP Segment, TCP Connection	7
34.	03-04-2021	Upper OSI Layers: Session Layer	
35.	06-04-2021	Presentation Layer	
36.	07-04-2021	Application Layer functions and services.	
		Unit-6	
37.	09-04-2021	Network Design and Applications	
38.	10-04-2021	Network Layout	
39.	16-04-2021	Network Design Metrics	
40.	17-04-2021	Network design traceability	
41.	20-04-2021	WWW, DNS	8
42.	21-04-2021	Voice over IP	
43.	23-04-2021	Introduction and Comparison of mobile network system	
44.	24-04-2021	applications: 2G, 3G, 4G.	
45.	28-04-2021	Telephone Nework	Conte
46.	25-05-2021	Dial-Up Modems	nt Beyo
47.	28-05-2021	Digital Subscriber Line	nd Sylla
48.	29-05-2021	Cable TV Networks	bus

Faculty: - Prof. A. A. Gulhane

Head
Deptt. of Information Technology
(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Teaching Plan: Session 2020-21

Course Name & Code: Social Sciences & Engineering Economics [4IT05]
Name of Faculty: Prof. Avinash G. Mahalle
Year & Semester: Second Year IV [A]

Lecture No.	Planned Dates	Topics to be covered	Total Hours
1	01-02-2021	Vision & Mission of Institute, Vision & Mission of Dept. Graduate Attributes, COs & CLOs, Grading Scheme, Text books & reference books, Syllabus	01
		UNIT-1	08
2	03-02-2021	Basics of Social Science	
3	05-02-2021	Importance of study of social science to Engineer	
4	06-02-2021	Constitution of India	
5	08-02-2021	Salient features of Indian constitution	
6	10-02-2021	Fundamental Rights	
7	12-02-2021	Fundamental Duties	
8	13-02-2021	Directive Principles of State Policy	
9	15-02-2021	Difference between Fundamental Rights & DPSP	
		UNIT-2	08
10	17-02-2021	Indian Parliament	
11	20-02-2021	Composition of Indian Parliament	
12	22-02-2021	Powers of Indian Parliament	
13	24-02-2021	President of India	
14	26-02-2021	Powers of the President	
15	27-02-2021	Prime Minister: Powers & Functions	
16	01-03-2021	Council of Ministers	
17	03-03-2021	Difference between Cabinet & Council of Ministers	
		UNIT-3	08
18	05-03-2021	Culture & its characteristics	
19	06-03-2021	Civilization & its characteristics	
20	08-03-2021	Impact of science & technology on culture & civilization	
21	10-03-2021	Society & its characteristics	
22	12-03-2021	Community & its characteristics	
23	13-03-2021	Group & types of groups	
24	15-03-2021	Marriage: Functions, Types & Problems	
25	17-03-2021	Family: Functions, Types & Problems	

Lecture No.	Planned Dates	Topic to be covered	Total Hours
		UNIT-4	
26	19-03-2021	Meaning of Production	09
27	20-03-2021	Factors of production [Land, Labour]	
28	22-03-2021	Factors of production [Capital, Organization]	
29	24-03-2021	Laws of Returns	
30	26-03-2021	Forms of Business Organization: Individual Enterprise	
31	27-03-2021	Partnership, Joint Stock Company	
32	31-03-2021	Comparison of Joint-stock Company & Partnership	
33	03-04-2021	Co-operative organization	
34	05-04-2021	Public Enterprise	
		UNIT-5	
35	07-04-2021	Banking & its types	08
36	09-04-2021	Functions of Central Banks	
37	10-04-2021	Functions of Commercial Banks	
38	12-04-2021	Comparison between Central & Commercial Bank	
39	16-04-2021	Introduction to GST	
40	17-04-2021	Market Forms	
41	19-04-2021	Perfect & Imperfect Competition	
42	21-04-2021	Monopoly	
		UNIT-6	
43	23-04-2021	Definitions of Economics	08
44	24-04-2021	Nature of Economics	
45	30-04-2021	Scope of Economics	
46	03-05-2021	Special significance of Economics to Engineers	
47	05-05-2021	Economics of Development	
48	07-05-2021	Characteristics of under development	
49	08-05-2021	Obstacles to Economic growth	
50	10-05-2021	Vicious circle of poverty	
		Total Lectures Planned	50

Prof. A. G. Mahalle

Head
Deptt. of Information Technology
P.R.M.I.T.& R. Badnera-Amravati.
Dr. P. V. Ingole
HODIT

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Teaching Plan: Session 2020-21

Course Name & Code: Social Sciences & Engineering Economics [4IT05]
Name of Faculty: Prof. Avinash G. Mahalle
Year & Semester: Second Year IV [B]

Lecture No.	Planned Dates	Topics to be covered	Total Hours
1	01-02-2021	Vision & Mission of Institute, Vision & Mission of Dept. Graduate Attributes, COs & CLOs, Grading Scheme, Text books & reference books, Syllabus	01
		UNIT-1	
2	02-02-2021	Basics of Social Science	08
3	03-02-2021	Importance of study of social science to Engineer	
4	06-02-2021	Constitution of India	
5	08-02-2021	Salient features of Indian constitution	
6	09-02-2021	Fundamental Rights	
7	10-02-2021	Fundamental Duties	
8	13-02-2021	Directive Principles of State Policy	
9	15-02-2021	Difference between Fundamental Rights & DPSP	
		UNIT-2	
10	16-02-2021	Indian Parliament	08
11	17-02-2021	Composition of Indian Parliament	
12	20-02-2021	Powers of Indian Parliament	
13	22-02-2021	President of India	
14	23-02-2021	Powers of the President	
15	24-02-2021	Prime Minister: Powers & Functions	
16	27-02-2021	Council of Ministers	
17	01-03-2021	Difference between Cabinet & Council of Ministers	
		UNIT-3	
18	02-03-2021	Culture & its characteristics	08
19	03-03-2021	Civilization & its characteristics	
20	06-03-2021	Impact of science & technology on culture & civilization	
21	08-03-2021	Society & its characteristics	
22	09-03-2021	Community & its characteristics	
23	10-03-2021	Group & types of groups	
24	13-03-2021	Marriage: Functions, Types & Problems	
25	15-03-2021	Family: Functions, Types & Problems	

Lecture No.	Planned Dates	Topic to be covered	Total Hours
		UNIT-4	
26	16-03-2021	Meaning of Production	09
27	17-03-2021	Factors of production [Land, Labour]	
28	20-03-2021	Factors of production [Capital, Organization]	
29	22-03-2021	Laws of Returns	
30	23-03-2021	Forms of Business Organization: Individual Enterprise	
31	24-03-2021	Partnership, Joint Stock Company	
32	27-03-2021	Comparison of Joint-stock Company & Partnership	
33	30-03-2021	Co-operative organization	
34	31-03-2021	Public Enterprise	
		UNIT-5	
35	03-04-2021	Banking & its types	08
36	05-04-2021	Functions of Central Banks	
37	06-04-2021	Functions of Commercial Banks	
38	07-04-2021	Comparison between Central & Commercial Bank	
39	10-04-2021	Introduction to GST	
40	12-04-2021	Market Forms	
41	17-04-2021	Perfect & Imperfect Competition	
42	19-04-2021	Monopoly	
		UNIT-6	
43	20-04-2021	Definitions of Economics	08
44	21-04-2021	Nature of Economics	
45	24-04-2021	Scope of Economics	
46	03-05-2021	Special significance of Economics to Engineers	
47	04-05-2021	Economics of Development	
48	05-05-2021	Characteristics of under development	
49	08-05-2021	Obstacles to Economic growth	
50	10-05-2021	Vicious circle of poverty	
		Total Lectures Planned	50

Prof. A. G. Mahalle

Dr. P. V. Ingole
Head
Dept. of Information Technology,
PRMIT&R Badnera-Amravati
HODIT

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Lesson Plan (Session 2020-21)

Course Number and Title: - Web Commerce (8IT04)
Name of Faculty: - Dr.A.S.Alvi
Semester: - VIII

Section :- A+B

Sr No.	Planned Date	Topic Name	Total hours
		UNIT-I	
1	18-01-2021	Basic web commerce concepts	
2	19-01-2021	Basic web commerce concepts	
3	20-01-2021	Electronic commerce environments,	
4	21-01-2021	Electronic marketplace technologies,	6
5	22-01-2021	EDI	
6	25-01-2021	Electronic commerce with www internet, commerce net advocacy.	
		UNIT-II	
7	26-01-2021	Approach to safe E-commerce: overview	
8	27-01-2021	Secure transport protocol and transaction	
9	28-01-2021	Secure Electronic Payment Protocol(SEPP)	6
10	29-01-2021	Secure Electronic Transaction(SET)	
11	01-02-2021	Certificate for authentication	
12	02-02-2021	Security on web server and enterprise network.	
		UNIT III	
13	03-02-2021	Electronic cash and Electronic payment scheme: overview	
14	04-02-2021	Internet monetary payment and security requirements	
15	05-02-2021	Internet monetary payment and security requirements	
16	08-02-2021	Payment & purchase order process:Account Holder Registration	8
17	09-02-2021	Merchant Registration	
18	10-02-2021	Account Holder Ordering, Payment Authorization	
19	11-02-2021	Online Electronic cash	
20	12-02-2021	Electronic Payment Schemes	
		UNIT-IV	
21	15-02-2021	**Internet/Intranet Security issues and solutions: Needs for computer security**	
22	16-02-2021	**Security strategies**	
23	17-02-2021	**Encryption**	
24	18-02-2021	MasterCard/ visa secure Electronic Transaction: Introduction, requirements	10
25	22-02-2021	MasterCard/ visa secure Electronic Transaction : concepts	
26	23-02-2021	payment processing: Cardholder Registration	
27	24-02-2021	Payment processing: Cardholder Registration	
28	25-02-2021	Payment processing: Merchant Registration	
29	01-03-2021	Payment processing: Purchase Request	
30	02-03-2021	Payment processing: Payment Authorization & Capture	

		UNIT-V	
31	03-03-2021	Secure E-mail Technologies: Introduction	
32	04-03-2021	Means of distribution, Models for message handling	
33	05-03-2021	How does Email work?	6
34	08-03-2021	MIME	
35	09-03-2021	S/ MIME ,MOSS	
36	10-03-2021	MIME and Related facilities for EDI over the internet	

		UNIT-VI	
37	12-03-2021	Internet & web site Establishment:Internet Resources for commerce: introduction,	
38	15-03-2021	Web server Technologies	
39	16-03-2021	Internet tools Relevant to commerce	6
40	17-03-2021	Internet applications for commerce	
41	18-03-2021	Internet Access and Architecture	
42	19-03-2021	Internet searching	
42	22-03-2021	Internet searching	
43	23-03-2021	Revision of Unit I	
44	24-03-2021	Revision of Unit II	
45	25-03-2021	Revision of Unit III	
46	26-03-2021	Revision of Unit IV	
47	30-03-2021	Revision of Unit V	
48	31-03-2021	Revision of Unit VI	

Faculty: -   Dr. A.S.Alvi

HOD

(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-2021)

Course Number and Title: - Computer Networks (6IT04)
Name of Faculty: -   Prof. G.K.Wadnere
Semester: -   VI   Section: - A
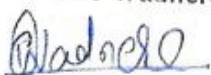
Lecture No.	Planned Dates	Topic Name	Total Hours
		Unit 1	
1	18.1.21	Introduction to Vision, Mission, CO & CLO, Graduate Attributes	
2	19.1.21	Introduction to Computer network, Uses, Hardware, Software	
3	20.1.21	Reference Model, Standardization	
4	22.1.21	Physical Layer	
5	23.1.21	Theoretical Basis for DC	08
6	25.1.21	Guided transmission Media	
7	27.1.21	Wireless Transmission, communication satellite, Public Switched Telephone Network	
8	5.2.21	Mobile Telephone System, Cable Television	
		Unit 2	
9	6.2.21	Data Link Layers	
10	12.2.21	Data Link Layers : Design issues	08
11	15.2.21	Error detection and correction	

12	16.2.21	Elementary Data Link protocols	
13	17.2.21	Sliding window Protocols	
14	24.2.21	Sliding window Protocol Verification	
15	26.2.21	Protocol Verification	
16	27.2.21	Example DL protocols	
		Unit 3	
17	1.3.21	MAC Sub layer	
18	2.3.21	Static and Dynamic channel allocation	
19	4.3.21	Multiple Access protocols, ALHOA, CSMA	
20	5.3.21	Collision Free Protocols	
21	6.3.21	Ethernet	08
22	8.3.21	Wireless LANS	
23	9.3.21	Broadband Wireless, Bluetooth	

24	10-3-201	Data Link Layer Switching	
25	12.3.21	**Unit 4** Network Layer	
26	13.3.21	Design Issues, Routing methods	
27	12.4.2021	Shortest path, flooding, Link state	
28	30.4.201	Distance vector routing	
29	03.05.2021	Broadcast & multicast routing	
30	4.5.2021	Congestion control algorithms	09
31	5.5.2021	Internet working	
32	7.5.2021	Quality of services	
33	8.5.2021	Network layer in the Internet	
34	10.5.2021	**Unit 5** The Transport Layer, Service primitives	
35	11.5.2021	UDP, RPC,RTTP	08

36	12.5.2021	TCP Services and Features	
37	15.5.2021	TCP segment format	
38	17.5.2021	TCP segment format	
39	18.5.2021	TCP Connections	
40	21.5.2021	TCP Timers, Performance Issue	
41	22.5.2021	Transmission Control protocol services, User Data gram Protocol services	
		Unit 6	
42	24.05.2021	The Application Layer	
43	25.5.2021	The Application Layer Services and Functions	
44	28.5.21	DNS,	
45	29.5.2021	Electronic Mail	
46	31.5.21	World Wide Web	07
47	1.6.2021	Multimedia	
48	2.6.2021	Voice over IP, H.323, Video on demand	

Subject Teacher
Prof. G.K Wadnere

HOD
Dr. P.V. Ingole
Head
Deptt. of Information Technology
P.R.M.I.T.& R. Badnera-Amravati.

Course Number and Title: - **Principles of Management (6IT01)**
Name of Faculty: - **Prof. H.D.Kale**
Semester: - **VI**   Section :- A

Sr No.	Planned Date	Topic Name	Total hours
		UNIT-I	
1	18.1.21	Introduction: Definition and concepts of management	08
2	19.1.21	Importance of management	
3	20.1.21	Various management functions	
4	22.1.21	Control, responsibilities	
5	23.1.21	Human resources planning	
6	25.1.21	Decision-making	
7	27.1.21	Trade unions	
8	5.2.21	Collective bargaining	
		UNIT-II	
09	6.2.21	Organization planning	08
10	12.2.21	Design and development-Introduction	
11	15.2.21	Design and development	
12	16.2.21	Production resources	
13	17.2.21	Production planning	
14	24.2.21	Types of production system	
15	26.2.21	Production systems	
16	27.2.21	Production control	
		UNIT-III	
17	1.3.21	Product design & development-Introduction	08
18	2.3.21	Product design & development	
19	4.3.21	Design of the product	
20	5.3.21	Design of the product and types	
21	6.3.21	New product development	
		New product development types	

	22	8.3.21		
	23	9.3.21	Material planning and control	
	24	10-3-201	Material planning and control	

UNIT-IV

25	12.3.21	Maintenance and system reliability	
26	13.3.21	Concepts and Objectives of maintenance	
27	12.4.2021	Failure analysis	
28	30.4.2021	Reliability Maintenance	
29	03.05.2021	Reliability Maintenance system & Classification	08
30	4.5.2021	Maintenance planning	
31	5.5.2021	TQM ISO 9000 a	
32	7.5.2021	Quality audit	

UNIT-V

33	8.5.2021	Marketing management- Introduction	
34	10.5.21	Marketing planning	
35	11.5.21	Consumer behavior	
36	12.5.21	Product management	
37	15.5.21	Pricing & promotion decision	08
38	17.5.21	Financial planning	
39	18.5.21	Source of finance	
40	21.5.21	Source of finance & types	

UNIT-VI

41	22.5.21	Project Management	
42	24.05.21	Concepts and importance of project	
43	25.5.21	Project implementation	
44	28.5.21	MIS MIS meaning and objectives	
45	29.5.21	Types of data, methods of data collection	
46	31.5.21	Analysis and presentation of data	08
47	1.6.2021	Editing, reporting and presentation of data	
48	2.6.2021	Decision options	

Head
Deptt. of Information Technology
L.N.C.T & K. Bodwara, Amravati

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Lesson Plan (Session 2020-21)

Course Number and Title: -   Data Communication and Networking (4IT02)

Name of Faculty: -   Prof. H. D. Misalkar

Semester: -IV   Section: - A

Lecture No.	Planned Dates	Topic Name	Total hours
		Unit-1	
1.	01-02-2021	Types of Network; Network Topologies	
2.	02-02-2021	OSI Vs TCP\IP Model	
3.	04-02-2021	Network Devices: Bridge, Switch, Router;	
4.	05-02-2021	Transmission Medium: Guided media, Unguided media;	7
5.	08-02-2021	Time and Frequency Domain,	
6.	09-02-2021	Types of Signals: Analog, Digital, Composite,	
7.	11-02-2021	Periodic, Aperiodic Signal.	
		Unit-2	
8.	12-02-2021	Data conversions: Digital-to-Digital	
9.	15-02-2021	Analog-to-Digital	
10.	16-02-2021	Digital-to-Analog; Configuring DTE-DCE Interface	
11.	18-02-2021	Manchester and Differential Manchester encoding	7
12.	22-02-2021	Shannon Capacity; Multiplexing: FDM	
13.	23-02-2021	WDM, TDM;	
14.	25-02-2021	Multiplexing Application: Mobile Telephone System	
		Unit-3	
15.	26-02-2021	Data Link Layer	
16.	01-03-2021	Design Issues: Services to Network Layer	
17.	02-03-2021	Framing, Flow control	
18.	04-03-2021	Error Control: Parity Bits	
19.	05-03-2021	Hamming Code, Cyclic Redundancy Check (CRC)	8
20.	08-03-2021	Data Link Protocols: Synchronous	
21.	09-03-2021	Asynchronous Protocols, CSMA/CD,	
22.	12-03-2021	WAN Connectivity Protocols: PPP and HDLC	

		Unit-4	
23.	15-03-2021	Addressing and Routing Switching Techniques	
24.	16-03-2021	IPv4 Addressing Scheme	
25.	18-03-2021	IPv6 addressing Overview	
26.	19-03-2021	Subnetting	7
27.	22-03-2021	Evaluating Network Address by router	
28.	23-03-2021	Distance Vector, Link State	
29.	25-03-2021	Ethernet Networks: Token Ring, FDDI.	
		Unit-5	
30.	26-03-2021	Networking and Services Transport Layer Services	
31.	30-03-2021	TCP Protocols	
32.	01-03-2021	UDP Protocols	7
33.	02-03-2021	TCP Segment, TCP Connection	
34.	05-04-2021	Upper OSI Layers: Session Layer	
35.	06-04-2021	Presentation Layer	
36.	08-04-2021	Application Layer functions and services.	
		Unit-6	
37.	09-04-2021	Network Design and Applications	
38.	12-04-2021	Network Layout	
39.	15-04-2021	Network Design Metrics	
40.	16-04-2021	Network design traceability	
41.	19-04-2021	WWW, DNS	8
42.	20-04-2021	Voice over IP	
43.	22-04-2021	Introduction and Comparison of mobile network system	
44.	23-04-2021	applications: 2G, 3G, 4G.	
45.	26-04-2021	Telephone Nework	Content Beyond Syllabus
46.	27-05-2021	Dial-Up Modems	
47.	29-05-2021	Digital Subscriber Line	
48.	30-05-2021	Cable TV Networks	

Faculty: -   Prof. H. D. Misalkar

Head
Deptt. of Information Technology
(Information Technology)

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Lesson Plan (Session 2020-21)

Course Number and Title: -   THEORY OF COMPUTATION (6IT03)
Name of Faculty: -   Prof. M. S. Deshmukh
Semester: -   VI   Section:- B

Sr No.	Planned Date	Topic Name	Total hours
		UNIT-I	
1	18-01-21	Alphabet	
2	19-01-21	Language , Operations	
3	20-01-21	Finite state machine, definitions, Finite automation model	
4	21-01-21	Acceptance of strings and languages	
5	22-01-21	Non deterministic finite automation	
6	25-01-21	Finite Automation	11
7	27-01-21	Equivalence Between NFA And DFA	
8	28-01-21	Conversion of NFA into DFA	
9	29-01-21	Minimisation Of FSM, Equivalence Between Two FSM's	
10	01-02-21	Moore machines	
11	02-02-21	Melay machines	
		UNIT-II	
12	04-02-21	Regular sets	
13	05-02-21	Regular Expressions, Identity Rules	
14	08-02-21	Manipulation of regular expressions	
15	09-02-21	Equivalence Between RE And FA	9
16	10-02-21	Inter Conversion, Pumping Lemma	
17	11-02-21	Closure properties of regular sets	
18	12-02-21	Regular Grammers, Right Linear & Left Linear Grammers	
19	15-02-21	Equivalence Between Regular Linear Grammer And FA	
20	16-02-21	Inter conversion between RE and RG.	
		UNIT III	
21	17-02-21	Context Free Grammer	
22	18-02-21	Derivation Trees	
23	22-02-21	Chomsky Normal Form	
24	23-02-21	Greibach Normal Form	9
25	24-02-21	Push Down Automata	
26	25-02-21	Definition, Model, Acceptance of CFL	
27	26-02-21	Equivalence of CFL and PDA	
28	01-03-21	Interconversion	
29	02-03-21	Enumeration of Properties of CFL	
		UNIT-IV	
30	03-03-21	Turing Machine	
31	04-03-21	Definition, Model, Design of TM	
32	05-03-21	Design of TM	9
33	08-03-21	Computable Functions	
34	09-03-21	Computable Functions	
35	10-03-21	Recursive Ensumerable Language	

36	12-03-21	Church's Hypothesis	
37	15-03-21	Counter Machine	
38	16-03-21	Types of TM's	
UNIT-V			
39	17-03-21	Chomshy Hierarchy of Languages	
40	18-03-21	Linear Bounded Automata	
41	19-03-21	Context Sensitive Language	6
42	22-03-21	Introduction of DCFL And DPDA	
43	23-03-21	LR (O)	
44	24-03-21	Grammer, Decidability of Problems	
UNIT-VI			
45	25-03-21	Properties of Recursive Ensumarable Languages	
46	26-03-21	Properties of Non Recursive Ensumarable Languages	
47	30-03-21	Universal Turing Machine	5
48	31-03-21	Post correspondance Problem	
49	01-04-21	Introduction to Recursive Function Theory	
50	05-04-21		Content beyond syllabus
51	06-04-21	GATE Questionnaire	
52	07-04-21		
53	08-04-21		
54	09-04-21	Revision of Unit I and II	
55	12-04-21	Revision of Unit III and IV	
56	15-04-21	Revision of Unit V and VI	

Faculty: -   Prof. M. S. Deshmukh

HOD :
(Information Technology)
P.R.M.I.T & R. Badnera-Amravati.

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
(Session 2020-21)

Course Number and Title: - Cloud Computing (8IT04)
Name of Faculty: -   Prof. N. S. Band
Semester :-   VIII

Section :-   A&B

Lecture No.	Planned Dates	Topic Name	Total hours
		Introduction to Course	
1	18/01/2021	Vision Mission of Institution, Vision Mission of our Department ,Objective of subject, Grading scheme, Text Books and Ref Books, Syllabus and Course Learning Outcomes (CLO),Application and importance of the Subject, Graduate Attributes	01
		Unit-1	
2	19/01/2021	Introduction to Cloud Computing.	
3	20/01/2021	The SPI Framework for Cloud Computing.	
4	21/01/2021	Relevant Technologies in Cloud Computing.	
5	22/01/2021	The Cloud Services Delivery Model.	08
6	25/01/2021	Cloud Deployment Models.	
7	27/01/2021	Key Drivers to Adopting the Cloud.	
8	28/01/2021	The Impact of Cloud Computing on Users.	
9	29/01/2021	Barriers to Cloud Computing Adoption in the Enterprise.	
		Unit-2	
10	01/02/2021	Introduction to Infrastructure Security	
11	02/02/2021	The Network Level: Ensuring Data Confidentiality and Integrity	
12	03/02/2021	Ensuring Proper Access Control.	
13	04/02/2021	The Host Level: SaaS and PaaS Host Security.	
14	05/02/2021	IaaS Host Security.	
15	08/02/2021	Virtual Server Security.	11
16	09/02/2021	The Application Level:	
17	10/02/2021	SaaS Application Security.	
18	11/02/2021	PaaS Application Security.	
19	12/02/2021	IaaS Application Security.	
20	15/02/2021	Data Security and Storage: Provider Data and Its Security.	
		Unit-3	
21	16/02/2021	Need of IAM	
22	17/02/2021	IAM challenge and definition	
23	18/02/2021	IAM Architecture and Practice.	
24	22/02/2021	Security Management in the Cloud	
25	23/02/2021	Security Management in the Cloud.	10
26	24/02/2021	Availability Management	
27	25/02/2021	SaaS	
28	26/02/2021	PaaS	
29	01/03/2021	IaaS Availability Management	
30	02/03/2021	Access control	
		Unit-4	
31	03/03/2021	Key Privacy Concerns in the Cloud	06

33	04/03/2021	Changes to Privacy.	
34	05/03/2021	Risk Management	
35	12/03/2021	Compliance in Relation to Cloud Computing.	
36	13/03/2021	Legal and Regulatory Implications	
37	15/03/2021	International Laws and Regulations.	
Unit-5		
39	16/03/2021	Internal Policy Compliance	
40	17/03/2021	Governance.	
41	18/03/2021	Risk.	
42	19/03/2021	and Compliance (GRC).	
43	22/03/2021	Illustrative Control Objectives for Cloud Computing.	08
44	23/03/2021	Incremental CSP-Specific Control Objectives.	
45	24/03/2021	Additional Key Management Control Objectives.	
46	25/03/2021	Control Considerations for CSP Users.	
47	26/03/2021	Regulatory/External Compliance.	
SUnit-6		
48	29/03/2021	The Impact of Cloud Computing on the Role of Corporate IT	
49	30/03/2021	Why Cloud Computing Will Be Popular with Business Units	
50	31/03/2021	Potential Threats of Using CSPs.	05
51	01/04/2021	A Case Study Illustrating Potential Changes in the IT Profession Caused by Cloud Computing	
52	05/04/2021	Governance Factors to Consider When Using Cloud Computing	
53	06/04/2021	AWS Cloud Service	Content
54	07/04/2021	Microsoft Azure Cloud Service	beyond
55	08/04/2021	GCP Cloud Service	Syllabus

Faculty: - Prof.N.S.Band

HOD Head
Deptt. of Information Technology
(Information Technology)
P.R.M.I.T.& R. Badnera-Amravati.

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Information Technology
Lesson Plan (Session 2020-21)

Course Number and Title: -   THEORY OF COMPUTATION (6IT03)
Name of Faculty: -   Prof. N. V. Kadam
Semester: -   VI

Section:- A

Sr No.	Planned Date	Topic Name	Total hours
		UNIT-I	
1	28-02-20	Alphabet	
2	29-02-20	Language , Operations	
3	30-02-20	Finite state machine, definitions, Finite automation model	
4	31-02-20	Acceptance of strings and languages	
5	1-01-21	Non deterministic finite automation	
6	4-01-21	Finite Automation	11
7	5-01-21	Equivalence Between NFA And DFA	
8	6-01-21	Conversion of NFA into DFA	
9	7-01-21	Minimisation Of FSM, Equivalence Between Two FSM's	
10	8-01-21	Moore machines	
11	11-01-21	Melay machines	
12	12-01-21	Regular sets	
13	13-01-21	Regular Expressions, Identity Rules	
14	14-01-21	Manipulation of regular expressions	
15	15-01-21	Equivalence Between RE And FA	9
16	18-01-21	Inter Conversion, Pumping Lemma	
17	19-01-21	Closure properties of regular sets	
18	20-01-21	Regular Grammers, Right Linear & Left Linear Grammers	
19	21-01-21	Equivalence Between Regular Linear Grammer And FA	
20	22-01-21	Inter conversion between RE and RG.	
21	25-01-21	Context Free Grammer	
22	26-01-21	Derivation Trees	
23	27-01-21	Chomsky Normal Form	
24	28-01-21	Greibach Normal Form	
25	29-01-21	Push Down Automata	9
26	1-02-21	Definition, Model, Acceptance of CFL	
27	2-02-21	Equivalence of CFL and PDA	
28	3-02-21	Interconversion	
29	4-02-21	Enumeration of Properties of CFL	
30	5-02-21	Turing Machine	
31	8-02-21	Definition, Model, Design of TM	
32	9-02-21	Design of TM	9
33	10-02-21	Computable Functions	
34	11-02-21	Computable Functions	
35	12-02-21	Recursive Ensumerable Language	

PROF. RAM MEGHE INSTITUTE OF TECHNOLOGY AND RESEARCH
BADNERA – AMRAVATI

B.E. (Regular/Second Shift) and M.E. (Regular/Part-time)

Academic Calendar for AY 2020 - 21 (Even Semester)
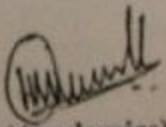
Start of Session*	11 / 01 / 2021 (Monday)
Commencement of classes	11 / 01 / 2021
Student Feedback -I	16 / 03 / 2021 to 20 / 03 / 2021
Class test – I	17 / 03 / 2021 to 20 / 03 / 2021
Parents Meet	27 / 03 / 2021 (Saturday)
Class test – II	17 / 05 / 2021 to 20 / 05 / 2021
Final Submissions and Student Feedback - II	19 / 05 / 2021 to 22 / 05 / 2021
University Examinations (Summer-2020)	June 2021 – As decided by SGBAU
Last day of academic session	29 / 05 / 2021 (Saturday)
Summer Vacations	31 / 05 / 2021 to 04 / 07 / 2021
Start of odd Semester (Winter-2021)	05 / 07 / 2021 (Monday)
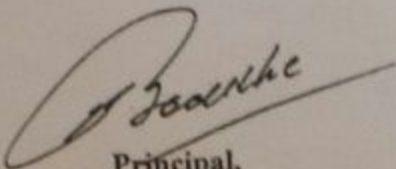
Note: *Changes in the Academic calendar (if any) shall be notified separately time to time.*
*Public Holidays:

S.N	Holidays	Day	Date
1	Republic Day	Tuesday	26 - January- 2021
2	Ch. Shivaji Maharaj Jayanti	Friday	19 - February -2021
3	Maha Shivratri	Thursday	11 - March - 2021
4	Holi (Second Day)	Monday	29 - March -2021
5	Good Friday	Friday	02- April - 2021
6	Gudhi Padwa	Tuesday	13 - April- 2021
7	Dr Babasaheb Ambedkar	Wednesday	14 - April - 2021

* As per SGBAU Gazette (Part-II) *notification No. 114/2020 dated 24/12/2020*

Dean (Academics)
PRMITR, Badnera

Principal,
PRMITR, Badnera

PROF RAM MEGHE INSTITUTE OF TECHNOLOGY AND RESEARCH, BADNERA – AMRAVATI

Academic Calendar for AY 2020 - 21 (Session- I)
For B.E. Odd Semester (Winter) and ME (FT)
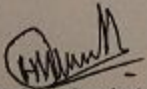
First Session (Odd Semester)*	04 / 08 / 2020 (Tuesday) to 26/12/2020 (Saturday)
Admission to Higher Classes	04 / 08 / 2020 to 31/08 /2020
Teaching Days (First Session)	17 / 08 / 2020 to 21/12 / 2020
Students Feedback – I	12 / 10/ 2020 to 17 / 10 / 2020
Common Test – I	12 / 10 / 2020 to 15 / 10 / 2020
Parents Meet (Online/ Offline)	17/ 10 / 2020 (Saturday)
Common Test –II	15 / 12 / 2020 to 19 / 12 / 2020
Final Submission and Students Feedback – II	15 / 12 / 2020 to 19 / 12 / 2020
Winter Vacation	09 /11/ 2020 to 21/ 11/ 2020
University Examinations (Winter 2020)	28 December 2020- 28 January 2021 – As per SGBAU Time-table
Start of Second Session*(Even Semester)	11 / 01 / 2021 (Monday)
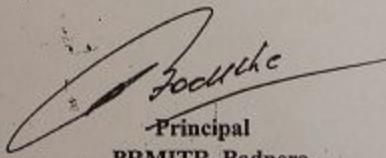
1. Changes (if any), in the Academic Calendar shall be separately notified from time to time.

Public Holidays* (Till the End of Session)

S.N.	Holidays	Day	Date
1	Independence Day	Saturday	15 - August- 2020
2	Ganesh Chaturthi	Saturday	22- August- 2020
3	Gouri Poojan	Wednesday	26 -August-2020
4	Anant Chaturdashi	Tuesday	01 -September-2020
5	Sarvapitri Amavasyya	Thursday	17-September-2020
6	Mahatma Gandhi Jayanti	Friday	02 - October -2020
7	Id-E-Milad	Friday	30- October-2020
8	Gurunanak Jayanti	Monday	30 - November -2020
9	Christmas	Friday	25 –December- 2020

*As per SGBAU Gazette (Part -II) No: 52/2020 dated 31/07/2020

Dean (Academics)
PRMITR, Badnera

Principal
PRMITR, Badnera

Copy to: Dean (Admn)/ Dean(T&P)/ Dean(Research)/ IQAC Coordinator/HOAD/ HOBD/ HOCD/HOED /HOFD /HOID /HOKD / HOMD/Accounts/Stud Section/ Estt/Library / Maintenance Dept/Sports /System Manager/Work Shop /Institute Website Coordinator

PROF. RAM MEGHE INSTITUTE OF TECHNOLOGY & RESEARCH, BADNERA
DEPARTMENT OF INFORMATION TECHNOLOGY
TIME-TABLE SESSION 2020-21 (EVEN SEMESTER)

DAY	SEM	11:00 TO 12:00	12:00 TO 01:00	01:00 TO 01:30	01:30 TO 02:30	02:30 TO 03:30	03:30 TO 04:30	04:30 TO 05:30
MON	IV A	OS / uvn	DCN / hdm	RECESS	DS / asm	EVS / pvh	OS / uvn	
	IV B	COA / ssk	SS & EE / agm	RECESS	OS / rrp	DS / ppd	OS / rrp	
	VI A	DBMS / sac	TOC / nvk	RECESS	CN / gkw	POM / hdk	CN / gkw	
	VI B	TOC / msd	CN / sns	RECESS	DBMS / prn	Aptitude Test	CN / sns	
	VIII A	DWC / svd	P.E Web Com asa / Cloud Com nsb	RECESS	NAS / pvd	SE / rmh	NAS / pvd	
	VIII B	DWC / pvi		RECESS	NAS / sis	SE / sdt	NAS / sis	
TUE	IV A	COA / awb	OS / uvn	RECESS	DCN / hdm	SS & EE / agm	DCN / hdm	
	IV B	SS & EE / agm	DCN / aag	RECESS	DS / ppd	OS / rrp	DCN / aag	
	VI A	TOC / nvk	CN / gkw	RECESS	POM / hdk	DBMS / sac	DBMS / sac	
	VI B	POM / hdk	DBMS / prn	RECESS	TOC / msd	Aptitude Test	DBMS / prn	
	VIII A	P.E Web Com asa	DWC / svd	RECESS	SE / rmh	NAS / pvd	SE / rmh	
	VIII B	Cloud Com nsb	DWC / pvi	RECESS	SE / sdt	NAS / sis	SE / sdt	
WED	IV A	DS / asm	COA / awb	RECESS	SS & EE / agm	OS / uvn	CS-Lab-II / awb	
	IV B	OS / rrp	SS & EE / agm	RECESS	DCN / aag	COA / ssk	CS-Lab-II / msd	
	VI A	CN / gkw	POM / hdk	RECESS	DBMS / sac	TOC / nvk	C Lab-IV / nvk	
	VI B	DBMS / prn	TOC / msd	RECESS	CN / sns	POM / hdk	C Lab-IV / rpf	
	VIII A	DWC / svd	P.E Web Com asa	RECESS	NAS / pvd	SE / rmh	C Lav-V / nsb	
	VIII B	DWC / pvi	Cloud Com nsb	RECESS	NAS / sis	SE / sdt	C Lav-V / spt	
THU	IV A	DCN / hdm	COA / awb	RECESS	DS / asm	SS & EE / agm	DS / asm	
	IV B	DS / ppd	COA / ssk	RECESS	OS / rrp	EVS / ssh	DS / ppd	
	VI A	POM / hdk	DBMS / sac	RECESS	TOC / nvk	Aptitude Test	IOT / agm	
	VI B	CN / sns	DBMS / prn	RECESS	POM / hdk	TOC / msd	IOT / hdk	
	VIII A	SE / rmh	NAS / pvd	RECESS	P.E Web Com asa / Cloud Com nsb	DWC / svd		
	VIII B	SE / sdt	NAS / sis	RECESS		DWC / pvi		
FRI	IV A	OS / uvn	DCN / hdm	RECESS	DS / asm	EVS / pvh		
	IV B	DCN / aag	DS / ppd	RECESS	COA / ssk	EVS / ssh		
	VI A	TOC / nvk	CN / gkw	RECESS	DBMS / sac	Aptitude Test	03:00 To 04:00	
	VI B	TOC / msd	DBMS / prn	RECESS	CN / sns	POM / hdk	F.E E-Comm spt	
	VIII A	DWC / svd	P.E Web Com asa	RECESS	NAS / pvd	SE / rmh		
	VIII B	DWC / pvi	Cloud Com nsb	RECESS	NAS / sis	SE / sdt		
SAT	IV A	SS & EE / agm	OS / uvn	RECESS	COA / awb	DS / asm		
	IV B	DS / ppd	DCN / aag	RECESS	SS & EE / agm	OS / rrp		
	VI A	F.E - E-Comm / spt		RECESS	CN / gkw			
	VI B	F.E - K M / rpf		RECESS	CN / sns			
	VIII A	Project						
	VIII B	Project						

Faculty legend:

- apb: Dr. A. P. Bedkhe
- pvi: Dr. P. V. Ingole
- svd: Prof. S. V. Dhopte
- asa: Dr. A. S. Alvi
- ssk: Prof. S. S. Kulkarni
- msd: Prof. M. S. Deshmukh
- pvd: Prof. P. V. Dudhe
- ppd: Dr. P. P. Deshmukh
- nvk: Prof. N. V. Kadam
- uvn: Prof. U. V. Nikam
- aag: Prof. A. A. Gulhane
- sdt: Prof. S. D. Thakur
- awb: Prof. A. W. Burange
- hdm: Prof. H. D. Misalkar
- sns: Prof. S. N. Sarda
- spt: Prof. S. P. Thakare
- rmh: Prof. R. M. Hushangabade
- prn: Prof. P. R. Nerkar
- rrp: Prof. R. R. Papalkar
- asm: Prof. A. S. Mahalle
- sis: Prof. S. I. Saudagar
- sac: Prof. S. A. Chorey
- nsb: Prof. N. S. Band
- rpf: Prof. R. P. Fuke
- gkw: Prof. G. K. Wadnere
- agm: Prof. A. G. Mahalle
- hdk: Prof. H. D. Kale
- ssh: Prof. S. S. Harne
- pvh: Prof. P. V. Harne

Time Table In-Charge

Head
Information Technology

w.e.f. 18/01/2021

PROF. RAM MEGHE INSTITUTE OF TECHNOLOGY & RESEARCH, BADNERA
DEPARTMENT OF INFORMATION TECHNOLOGY
TIME-TABLE SESSION 2020-21 (ODD SEMESTER)

DAY	SEM	09:00 TO 10:00	10:00 TO 11:00	11:00 TO 11:30	11:30 TO 12:00	12:00 TO 12:30	12:30 TO 01:00	01:00 TO 01:30	01:30 TO 02:30	02:30 TO 03:30	03:30 To 04:30	04:30 To 05:30
MON	III A	M-III vsd	OOP hdm	RECESS		DS sns		EVS pvh	OOP hdm			
MON	III B	ALP asm	ADE ssk	RECESS	M-III rvd			CS Lab-I prn	OOP ppd			
MON	V A		OS rrp	CAO awb		RECESS		DIC rpf	Aptitude Test	OS rrp		
MON	V B		DIC gkw	OS uvn		RECESS		CAO hdk	C-Lab III spt	OS uvn		
MON	VII A			DSP pvi		P.E AI & ES nsb		RECESS	RTES aag	WT rmh	DSP sac	
MON	VII B			DSP svd		DDBMS nvk		RECESS	WT sdt	OOSAD sis	DSP nvk	
TUE	III A	ALP pvd	M-III vsd	RECESS	OOP hdm			ADE agm	ADE agm			
TUE	III B	M-III rvd	OOP ppd	RECESS		DS asa		ADE ssk	ADE ssk/svd			
TUE	V A		CAO awb	DIC rpf		RECESS		OS rrp	Com-Skill pvg	DIC rpf		
TUE	V B		OS uvn	CAO hdk		RECESS		DIC gkw	Aptitude Test	DIC gkw		
TUE	VII A			OOSAD prn		DSP pvi		RECESS	P.E AI & ES nsb	RTES aag	RTES aag	
TUE	VII B			RTES msd		DSP svd		RECESS	DDBMS nvk / WT sdt	RTES msd		
WED	III A	DS sns	ALP pvd	RECESS		ADE agm		M-III vsd	CS-Lab-I awb			
WED	III B	ADE ssk	M-III rvd	RECESS		OOP ppd		ALP asm	CS-Lab-I prn			
WED	V A		DIC rpf	OS rrp		RECESS		CAO awb	C-Lab III sis	Comm-Skill pvg		
WED	V B		CAO hdk	DIC gkw		RECESS		OS uvn	Comm-Skill pvg	C-Lab III spt		
WED	VII A			WT rmh		OOSAD prn		RECESS	DSP pvi	P.E AI & ES nsb	WT rmh	
WED	VII B			OOSAD sis		RTES msd		RECESS	DSP svd	DDBMS nvk	WT sdt	
THU	III A	OOP hdm	ALP pvd	RECESS		DS sns		ADE agm	ALP pvd			
THU	III B	DS asa	ALP asm	RECESS	M-III rvd			EVS ssh	ALP asm			
THU	V A		OS rrp	CAO awb		RECESS		DIC rpf	Comm-Skill pvg	C-Lab III sis		
THU	V B		DIC gkw	OS uvn		RECESS		CAO hdk	Aptitude Test	Comm-Skill pvg		
THU	VII A			RTES aag		WT rmh		RECESS	OOSAD prn	DSP pvi		
THU	VII B			WT sdt		OOSAD sis		RECESS	RTES msd	DSP svd		
FRI	III A	M-III vsd	OOP hdm	RECESS		DS sns		EVS pvh				
FRI	III B	OOP ppd	DS asa	RECESS		ALP asm		EVS ssh				
FRI	V A		CAO awb	DIC rpf		RECESS		OS rrp	Aptitude Test	03:00 To 04:00		
FRI	V B		OS uvn	CAO hdk		RECESS		DIC gkw	Comm-Skill pvg	F.E. ICN spt / F.E. ITE&P sac		
FRI	VII A			P.E AI & ES nsb		RTES aag		RECESS	WT rmh	OOSAD prn		
FRI	VII B			DDBMS nvk		WT sdt		RECESS	OOSAD sis	RTES msd		
SAT	III A	ALP pvd	ADE agm	RECESS		M-III vsd		CS Lab-I awb				
SAT	III B	OOP ppd	DS asa	RECESS		ADE ssk		M-III rvd				
SAT	V A			F. E - ICN spt								
SAT	V B			F. E - ITE & P sac								
SAT	VII A			Project				RECESS	Project			
SAT	VII B			Project				RECESS	Project			

Time Table In-Charge

Head
Deptt. of Information Technology

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. V. D. Tonge   Semester VIII   Section: A/B/C   C

Subject Code: 8ME03   Subject Name: I. C. Engines.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	20/04/21	Method of generating Turbulence in combustion chamber	Tonge	
30	22/04/21	Types of Combustion chamber for CI engines	Tonge	
31.	26/04/21	MCQ on unit 4	Tonge.	
32.	28/04/21	Evaluation of various performance parameters of IC Engine	Tonge.	
33.	3/05/21	Heat balance sheet	Tonge	
34	4/05/21	Heat balance sheet calculation	Tonge.	
35.	5/05/21	Excess air calculation	Tonge.	
36.	6/05/21	Method of determining friction power & calculation	Tonge.	
37.	10/05/21	Supercharging : Basic principles & objectives	Tonge	Sign of
38.	11/05/21	MCQ on unit 5	Tonge	HOD
39.	12/05/21	Arrangement of supercharging, Advantages & Disadvantages	Tonge	
40.	13/05/21	Emission from IC engines	Tonge.	
41.	17/05/21	Effect of pollutants on human health & approaches to control	Tonge	online
42.	18/05/21	Study of BIS, EURO emission norms	Tonge.	
43.	19/05/21	Recent trends in IC Engine	Tonge.	
44.	20/05/21	Multi point fuel injection engines	Tonge	
45.	24/05/21	Common rail direct injection engines	Tonge.	
46.	25/05/21	Variable valve timing engines	Tonge.	
47.	27/05/21	MCQ on unit 6.	Tonge.	
48.	01/06/21	Revision of unit 1	Tonge.	
49.	2/06/21	Revision of unit 2	Tonge.	
50.	3/06/21	Revision of unit 3	Tonge.	
51	7/06/21	Revision of unit 4	Tonge	
52.	8/06/21	Revision of unit 5	Tonge.	
53.	9/06/21	Revision of unit 6	Tonge.	

Execution Plan

Name of Faculty:- **Prof. V. D. Tonge**   Semester **VIII**   Section: A/B/C | **C.** |

Subject Code: **8MF03**   Subject Name: **I. C. Engines**

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18/01/21	Basic of I.C. Engines	Tonge	
2	19/01/21	Details of two stroke & four stroke engines	Tonge	
3	20/01/21	Air standard cycles & Fuel air cycle	Tonge	
4	27/01/21	Actual cycle and Numericals	Tonge	
5	01/02/21	Variation in specific heat. Dissociation & its effect.	Tonge	
6	02/02/21	Review of other losses in IC engines	Tonge	
7	03/02/21	Numericals & MCQ	Tonge	●
8	04/02/21	Conventional fuels for IC engines	Tonge	
9	08/02/21	Requirement, Properties, fuel additive, Limitations of fuels	Tonge	
10	09/02/21	Review of various alternative/Non conventional fuels	Tonge	
11.	10/02/21	study of fuel injection system	Tonge	
12	11/02/21	Fuel pump and its working	Tonge	
13	15/02/21	Different types of fuel feed systems	Tonge	
14	16/02/21	studies of injection nozzles & fuel pump	Tonge	
15	18/02/21	MCQ on unit 2	Tonge	
16	22/02/21	Combustion in SI engines	Tonge	online
17	23/02/21	Stages of Combustion	Tonge	●
18	24/02/21	Factors influencing various stages	Tonge	
19	25/02/21	Normal & abnormal combustion, Detonation, Factors responsible for detonation	Tonge	
20	01/03/21	Effect of detonation. Octane rating of fuel	Tonge	
21	02/03/21	Requirement of combustion chambers for SI engine	Tonge	
22	03/03/21	Important types of combustion chamber for SI engines	Tonge	
23	04/03/21	MCQ on unit 3	Tonge	
24	08/03/21	Combustion in CI engine	Tonge	
25	09/03/21	stages of combustion in CI engines	Tonge	
26	12/04/21	Delay Period, factors affecting delay Period	Tonge	
27	15/04/21	Diesel Knock, cetane rating	Tonge	
28	19/04/21	Requirements for combustion chamber for CI engine	Tonge	

40		Emission from IC Engines .	
41		Review, their effect on human health.	
42		Cause of formation and approaches to control this pollutants.	
43	VI	Study of BIS, EURO emission norms.	
44		IC Engines: Recent trends: Microprocessor based engines.	
45		Multi-point fuel injection engines.	
46		Common rail direct injections engines.	
47		Variable valve timing engines.	

TEACHING PLAN

Subject: I.C.ENGINES   Semester: VIII   Subject Code: 8ME03

Lecture No.	Unit	Topic Covered	Remark
1	I	Basic of I.C.Engines.	
2		Details of two stroke and four stroke engines.	
3		Air standard cycles.	
4		Fuel air cycle.	
5		Actual cycle.	
6		Variation in specific heat, Dissociation and their effect on engine performance.	
7		Review of other losses in IC engines.	
8	II	Conventional fuels for IC engines.	
9		Requirement, properties, fuel additive, limitations of fossil fuels.	
10		Review of various alternative/non-conventional fuels.	
11		Studies of fuel injection systems.	
12		Fuel pump and its working.	
13		Different types of fuel feed systems.	
14		Studies of injectors nozzles.	
15		Bosch type fuel pump.	
16	III	Combustion in SI engines.	
17		Stages of combustion.	
18		Factors influencing various stages.	
19		Normal and abnormal combustion, Detonation, Factors responsible for detonation.	
20		Effect of detonation. Octane rating of fuel.	
21		Requirement of combustion chambers for SI engines.	
22		Important types of combustion chambers for SI engines.	
23		Relative advantages and disadvantages and application.	
24	IV	Combustion in CI engines.	
25		Stages of combustion in CI Engines	
26		Delay period, factor affecting delay period.	
27		Diesel knock, cetane rating.	
28		Requirements of combustion chamber for CI Engines.	
29		Methods of generating turbulence in combustion chamber.	
30		Combustion chambers for CI Engies.	
31		Types of combustion chambers for CI Engies.	
32	V	Evaluation of various performance parameters of IC Engines.	
33		Heat balance sheet.	
34		Heat balance sheet calculation.	
35		Excess air calculation.	
36		Methods of determination of friction power.	
37		Friction power calculations.	
38		Supercharging: Basic principles, objectives.	
39		Arrangements for super charging, advantages and limitations.	

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. V. D. Tonge   Semester III   Section: A/B/C   C

Subject Code: 3ME04   Subject Name: Engineering Thermodynamics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
26.	19/10/20	Work done during variable flow process	Tonge	
27.	20/10/20	Limitiation of 1st Law, Heat engine, refrigerator and Heat pump	Tonge	
28.	21/10/20	Kelvin-Plank and Clausious statement & Their equivalence	Tonge	
29.	26/10/20	Reversible & irreversible Process and Carnot cycle	Tonge	
30.	28/10/20	Propositions regarding The efficiency of carnot cycle	Tonge	
31.	02/11/20	COP of Heat Pump & refrigerator	Tonge	
32.	03/11/20	Numerical on second Law of Thermodymamics	Tonge	
33.	04/11/20	Numerical on Second Law of Thermodynamics	Tonge	
34.	09/11/20	Entropy, availability and irreversibility	Tonge	Sign of HOD
35.	10/11/20	Triple point, critical Point, sensible, Latent & superheat	Tonge	
36.	11/11/20	Wet steam, dryness fraction, Internal energy of steam	Tonge	
37.	23/11/20	specific vol^m, Enthalpy, entropy of Steam	Tonge	
38.	24/11/20	Mollier chart and steam table	Tonge	
39.	01/12/20	Work done & heat transfer with steam as working fluid	Tonge	
40.	02/12/20	Throtling of steam and various calorimeter	Tonge	
41.	07/12/20	Numerical on Mollier chart	Tonge	online
42.	08/12/20	Numerical on Properties of steam	Tonge	
43.	09/12/20	Basic concepts of Air Standard cycle & Assumptions	Tonge	
44.	15/12/20	Otto and diesel Cycle	Tonge	
45.	16/12/20	Comparison of otto & diesel cycle & numerical	Tonge	
46.	21/12/20	Semidiesel, sterling & Joules cycle	Tonge	
47.	23/12/20	Rankine & Modified Rankine Cycle	Tonge	
48.	28/12/20	Comparison of Rankic and Carnot cycle	Tonge	
49.	29/12/20	Numerical on Air standard cycle	Tonge	
50.	30/12/20	Numerical on Vapour cycle	Tonge	
51.	04/01/21	MCQ on unit 1,2 & 3	Tonge	
52.	05/01/21	MCQ on unit 3,4 & 5	Tonge	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- **Prof. V.D. Tonge**   Semester **III**   Section: A/B/C   **C**

Subject Code: **3ME04**   Subject Name: **Engineering Thermodynamics**

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11/08/20	Introduction to basic concepts of Thermodynamics and Macroscopic & microscopic approach	Tonge	
2.	12/08/20	Thermodynamic system, Type of system, state, Path Process and cycle	Tonge	
3.	17/08/20	Thermodynamic equillibrium, Temperature, Zeroth Law of Thermodynamics and Quasi-static Process	Tonge	
4.	18/08/20	Gas Law and Gas equation	Tonge	
5.	19/08/20	Numericals on Zeroth Law	Tonge	
6.	24/08/20	Defination of work and different types of work	Tonge	
7.	25/08/20	Heat & work, Heat & Work as path function	Tonge	
8.	02/09/20	Work done during various processes	Tonge	
9.	07/09/20	Work done during Various processes	Tonge	HOD
10.	08/09/20	Numerical on work done	Tonge	
11.	09/09/20	Energy, Classification of energy, Law of conservation of energy applied to closed system	Tonge	
12.	14/09/20	Work done in closed system, Joules experssion	Tonge	
13.	15/09/20	Derivation $PV^v = C$.	Tonge	
14.	16/09/20	specific heat and change in internal energy	Tonge	
15.	22/09/20	Heat transfer during various processes	Tonge	Order
16.	23/09/20	Heat transfer during Various Processes	Tonge	
17.	28/09/20	Numerical on first Law.	Tonge	
18.	29/09/20	Introduction to flow processes, Mass and energy balance in steady flow process	Tonge	
19.	30/09/20	Work done during steady flow process	Tonge	
20.	05/10/20	SFEE applied to Nozzles, diffusers, turbine & compressor	Tonge	
21.	06/10/20	Numerical on Nozzles, turbine & compressor	Tonge	
22.	07/10/20	SFEE applied to pump, boiler and condenser	Tonge	
23.	12/10/20	Numerical on Pump, boiler & condenser	Tonge	
24.	13/10/20	SFEE applied to Heat Exchanger & Throttling Devices	Tonge	
25.	14/10/20	Numerical on Heat Exchanger & Throttling Devices	Tonge	

Head
Mechanical Engineering
Badnera

Scanned by CamScanner

33		Numerical on Second law of thermodynamic	
34		Introduction to Entropy, Availability and irreversibility. Principle of increase of Entropy	
35		Triple point, critical point, Sensible heat, latent heat, superheat and total heat of steam	
36		Wet steam, dryness fraction, Internal energy of steam, External work of evaporation	
37		Specific volume, enthalpy, internal energy and entropy of steam	
38	V	T-S diagram, Mollier chart, Steam tables and their use	
39		Work done and heat transfer during various thermodynamics processes with steam as working fluid	
40		Throttling of steam and determination of dryness fraction using various calorimeters.	
41		Numerical on dryness fraction	
42		Numerical on dryness fraction	
43		Basic concepts of Air Standard Cycle and its assumption	
44		Ottto and diesel cycle with their efficiencies and mean effective pressure.	
45		Comparison of Ottto and diesel cycle and Numerical	
46	VI	Semidiesel, sterling and joule cycles with their efficiencies and mean effective pressure	
47		Rankine and Modified Rankine Cycle.	
48		Comparison of Rankine and Carnot cycle, representation on P-V, T-S and H-S diagram.	
49		Numerical on Air Standard Cycles	
50		Numerical on Vapour Cycles	

TEACHING PLAN

Subject: Engineering Thermodynamics   Semester: III   Subject Code: 3ME04

Lecture No.	Unit	Topic Covered	Remark
1	I	Introduction to basic concepts of thermodynamics ,Macroscopic and microscopic approaches	
2		Thermodynamic system, classes of system, Properties of system, state, path, processes and cycle	
3		Thermodynamic equilibrium, Temperatures, Zeroth law of thermodynamics and Quasi-static process	
4		Gas Laws and Ideal gas equation of states, Characteristic gas constant, universal gas constant and Characteristic gas equation	
5		Numerical on Zeroth law	
6		Definition of work, thermodynamic work, displacement work and other forms of work	
7		Definition of Heat, Work and heat transfer as path function, comparison of work and heat	
8		Work done during various processes	
9		Work done during various processes, P-V diagrams	
10		Numerical on work done during various processes	
11	II	Energy, classification of energy, law of conservation of energy applied to closed system under going a cycle	
12		Work done in closed system (pdv work), Joules experiment	
13		Energy a property of system, internal energy- a function of temperature, Enthalpy, Derivation $PV^{\gamma} = C$	
14		specific heat at constant volume and constant pressure, Change in internal energy	
15		Heat transfer during various processes	
16		Heat transfer during various processes	
17		Numerical on First law of thermodynamic	
18	III	Introduction to flow processes, Mass balance and energy balance in steady flow process	
19		Work done during steady flow process	
20		SFEE applied to nozzles, diffusers, turbine and compressor	
21		Numericals on SFEE applied to nozzles, diffusers turbine and compressor	
22		SFEE applied to pumps, boiler and condenser	
23		Numericals on SFEE applied to pumps, boiler and condenser	
24		SFEE applied to heat exchangers and Throttle devices	
25		Numericals on SFEE applied to heat exchangers and Throttle devices	
26		Work done during variable flow processes	
27	IV	Limitations of Ist law, Thermal energy reservoir, heat engines refrigerator and heat pumps	
28		Kelvin-Plank and Clausious statements and their equivalence	
29		reversible and irreversible processes and Carnot cycle	
30		Propositions regarding the efficiency of Carnot cycles, The thermodynamic temperature scale and Reverse carnot cycle	
31		COP of heat pump and refrigeration, Inequality of Clausius.	
32		Numerical on Second law of thermodynamic	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- P. K. Gawande   Semester 7th   Section: A/B/C   B

Subject Code: 7ME01   Subject Name: MDD-II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	31/10/20	Design of worm gear	K	
30	5/11/20	Introduction to drives	K	
31	6/11/20	Design of flat belt drive	K	Rolling friction
32	7/11/20	Numericals on flat belt drive	K	
33	19/11/20	Problems on length of flat belt	K	
34	20/11/20	Problems on V-belt drive	K	
35	21/11/20	Problems on Wire rope	K	
36	26/11/20	Design problems on wire rope	K	
37	27/11/20	Design of pulleys	K	
38	28/11/20	Problems on pulleys	K	
39	3/12/20	Introduction to ICE parts	K	
40	4/12	Design procedure for cylinder	K	
41	5/12	Problems on design of cylinder	K	
42	10/12	Design procedure for piston	K	
43	11/12	Problems on piston	K	
44	12/12	Design of cylinder head	K	
45	17/12	Problems on cylinder head	K	
46	18/12	Design of connecting rod	K	
47	19/12/20	Problems on connecting rod	K	
48	24/12/20	Problem on connecting rod	K	
49	01/01/21	Design of governor	K	
50	02/01/21	Design of Hartnell governor	K	
51	07/8/21	Problems on Hartnell governor	K	

Head
Mechanical Engineering
Badnera

Execution Plan

Name of Faculty:- T.K. Gawanda   Semester: 7th   Section: A/B/C   B
Subject Code: 7ME01   Subject Name: Machine Design & Drawing - II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	13)08)20	Introduction to machine design	∠	online
2	14)08)20	Steps of MD	∠	lectures
3	20)08)20	Design of shaft	∠	
4	21)08)20	Problems on B.m. of shaft	∠	
5	27/08	Problems on combined B.m & f.c	∠	
6	28/08	Problems on axial load	∠	
7	29/08	Design of keys	∠	
8	3/09	Problems on machine keys	∠	
9	4/09	Design of Couplings	∠	
10	5/09	Problems on couplings	∠	
11	10/09	Problems on couplings	∠	
12	11/09	Design of flywheel	∠	
13	12/09	Problems on flywheel	∠	
14	18/09	Problems on flywheel	∠	
15	19/09	Introduction to bearings	∠	
16	24/09	Design of sliding bearing	∠	
17	25/09	Design problems of sliding bearing		
18	26/09	Design of antifriction bearing	∠	
19	1/10	selection of antifriction bearing	∠	
20	3/10	Problems of antifriction bearing	∠	
21	8/10	Introduction to Gears	∠	
22	9/10	Terminologies of Spur gear	∠	
23	10/10	Design of spur gear	∠	
24	22/10	Design problems on spur gear	∠	
25	23/10	problems on spur gear	∠	
26	24/10	Design of helical gear	∠	
27	29/10	Design of bevel gear	∠	
28	30/10	Design problems on bevel gear.		

22	designations, stresses in wire rope			
23	selection of wire rope for given loads			
24	Problems			
25	Design of Gears Classification, law of gearing, forms and system of teeth			UNIT -III
26	interference, beam strength of teeth, dynamic tooth load, wear tooth load, tooth failure			
27	Problems on gears			
28	a) Spur gear –Design of gear			
29	Problems on spur gear			
30	b) Helical gear -Classification face width, formative teeth number			
31	strength of gear Design of gear			
32	c) Bevel gear- Classification, pitch angles, strength of gear			
33	Design of gear			
34	d) Worm gear -Types, efficiency of gear			
35	Design of gear			
36	Problems			
37	a)Design of I.C.Engine parts			UNIT-IV
38	Design of Cylinder, Piston, Piston rings, Piston pin, Connecting rod and Crank,			
39	Problems,			
40	Problems,			
41	b)Design and Drawing of Governor (Parts and Assembly)			
42	Types of Governors			
43	Design procedure of governor of hartnell's governor			
44	Design procedure of governor of hartnell's governor			
45	problem of Hartnell's governer (including design of Spring, spindle, lever and balls).			
46	Problem			
47	Problem			
48	problem			

Teaching Plan 2020-21

Subject Code: 7ME01   **Subject Name: Machine Design and Drawing-II**

Lecture	Topic	Date	Unit
1	a) Design of Shaft : Material,		
2	Design on the basis of strength considering shaft subjected to - Twisting moment only		
3	Bending moment only Combine twisting and bending moment		
4	- Design on the basis of rigidity.		
5	b)Design of Key - types, strength of key		
6	c) Design of coupling - types, requirements of good ouplingc		
7	design of sleeve coupling, clamp or compression coupling		
8	rigid flange coupling,flexible flange coupling		
9	d) Design of fly-wheel : Function, coefficients of fluctuation of speed and energy		
10	energy stored in fly wheel, construction, stresses in fly wheel arms and rim		
11	Design of fly wheel based on T-M diagram, fly wheel for Otto cycle engines and punching machines		UNIT - I
12	Problems		
13	a)Antifriction Bearings: Types of bearing, construction, designations		
14	standard load ratings by AFBMA for static and dynamic loads		
15	life of bearings,selection of bearings,lubrication,mounting and enclosure.		
16	b) Journal bearings: lubrication of bearings, stable lubrication, Thick film lubrication, pressure distribution		
17	minimum film thickness, relations of variables- viscosity, coefficient of friction, speed, pressure, length and diameter, bearing modulus, viscosity-Temperature chart, Sommerfeld number, selection of lubricant		
18	design procedure and numericals		
19	c) Design of belt-Flat belts -types, material and construction of belt, types of drives, slip, creep, Design of belt.		
20	V-Belts -Construction and types, design of V belts		UNIT - II
21	d) Wire Rope -Selection ,Construction, classification		

Name of Faculty:- T. K. Liawande

Subject Code: 6ME01   Semester 6th   Section: A/B/C   [A]

Subject Name: Fluid power - II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19/1/21	Introduction to fP-II.		
2	20/1/21	Introduction to prime movers	u	
3	27/1/21	Details of Hydraulic turbines	k	
4	24/02/21	Difference between Pelton, Francis & kaplan	k	online lectures
5	2/3/21	Aanalysis of turbine	k	
6	3/3/21	Problems on Turbines.	k	
7	9/3/21	Problems on turbine	k	
8	10/3/21	Reorreming of turbine	k	
9	20/4/21	Basic theory of Centrifugal pump	k	
10	21/4/21	Classification of antoitrya pump	k	
11	27/4/21	NPSH & caviations of pump	k	
12	28/4/21	Characteristics of c.P.	k	
13	4/5/21	Numericals on c.P.	k	
14	5/5/21	Numericals on C.P.	k	
15	11/5/21	Axial flow pump	k	
16	12/5/21	operations & characteristics of AP.	k	
17	18/5/21	Water lifting devices	k	
18	19/5/21	Air lift pump	k	
19	25/5/21	Jet pump	k	
20	26/5/21	Hydraulic ram	k	
21	8/6/21	Computational fluid dynamics	k	
22	9/6/21	Importance of gorning equation		

Head
Deptt of Mechanical Engineering
P.R.M.I.T & R. Badnera

39	Rayliegh lines		
40	Hydrostatic systems		
41	Hydrostatic systems & their function		
42	Components of Hydraulic system		
43	application of fluid drive for machine tools	UNIT - VI	
44	application of fluid drive for machine tools		
45	Intensifier and accumulator		
46	Hydrokinetic systems		
47	Fluid couplings and		
48	Torque converter.		

Teaching Plan 2020-21
Subject Code: 6ME01   Subject Name: Fluid Power-II

Lecture	Topic		Date
1	Introduction to Prime Movers	UNIT - I	
2	Theory of impulse and reaction machines.		
3	Pelton, Francis and Kaplan turbines		
4	Analysis, characteristics and governing turbines		
5	draft tube, unit quantities.		
6	Numerical on Turbine		
7	Numerical on Turbine		
8	Introductions to Centrifugal pumps	UNIT - II	
9	Basic Theory, classification, construction,		
10	Characteristics of Centrifugal Pump		
11	Multistage of C.P		
12	NPSH and cavitations in pumps		
13	Numericals on Centrifugal Pump		
14	Numericals on Centrifugal Pump		
15	Introduction to Axial flow pump	UNIT - III	
16	Basic theory, construction, operation, and characteristics of axial pump		
17	water lifting devices		
18	Air lift pump.		
19	Jet Pump		
20	Hydraulic Ram.		
21	Introduction to Computational Fluid Dynamics (CFD). Basic Definition		
22	Applications of CFD in the area of research & Industry		
23	Comparison of Experimental Fluid Dynamics and Computational Fluid Dynamics		
24	Importance of Governing Equations and the physical meaning of the involved terms		
25	Positive displacement Pumps	UNIT - IV	
26	Reciprocating Pumps :- Basic theory, types,		
27	construction, installation and characteristics		
28	Rotary Pumps :- Basic theory		
29	types, construction of rotary pump		
30	Variable delivery pumps.		
31	Numericals on rotary pump		
32	Compressible fluid flow	UNIT - V	
33	Perfect gas relationship		
34	Numericals on Compressible fluid flow		
35	Numericals on Compressible fluid flow		
36	speed of sound wave, mach number		
37	Isothermal and isotropic flows		
38	shock waves		

Sr.No		Topics Covered	Sign of Faculty	Sign of HOD
30.	12·4·21	**UNIT V:** Robot Kinematics- Forward & reverse kinematics,		online
31.	15·4·21	Forward and reverse transformation of two DOF.		—ıı—
32.	16·4·21	Three DOF, 2-D manipulator.		—ıı—
33.	18·4·21	Homogeneous transformations.		—ıı—
34.	19·4·21	**UNIT VI:** Quantitative Techniques for economic performance of robots.		—ıı—
35.	22·4·21	Robot investment costs, robot operating expenses.		—ıı—
36.	23·4·21	Methods of economic evaluation, method of pay-back period.		—ıı—
37.	29·4·21	Return on investment method.		—ıı—
38.	30·4·21	Discounted cash flow method.		—ıı—
39.	2·5·21	Revision of Unit No. I		—ıı—
40.	3·5·21	Revision of Unit No. I		—ıı—
41.	6·5·21	Revision of Unit II		—ıı—
42.	7·5·21	Revision of Unit no. II		—ıı—
43.	9·5·21	Revision of Unit III		—ıı—
44.	10·5·21	Revision of Unit III		—ıı—
45.	13·5·21	Revision of Unit IV		—ıı—
46.	14·5·21	Revision of Unit IV		—ıı—
47.	16·5·21	Revision of Unit IV		—ıı—
48.	17·5·21	Revision of Unit V		—ıı—
49.	20·5·21	Revision of Unit VI		—ıı—
50.	21·5·21	Revision of Unit VI .		—ıı—
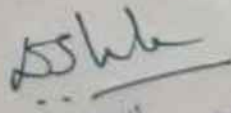
RECOMMENDED BOOKS :

TEXT BOOKS :

1) Robotics Technology & Flexible Automation by S.R.Deb, Tata Mcgraw Hill.
2) Industrial Robotics by M.P.Groover, McGraw Hill.

REFERENCE BOOKS:

1. Robotics for Engineering, Korean Yoram, McGraw Hill.
2. Robots & Manufacturing automation by Asfahal, C.Ray, John Wiley.
3. Robotic Engineering by Richard D. Klafter, PHI.

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Department of Mechanical Engineering
Execution Plan (Session 2020-21)

Name of Faculty: M.V.Gudadhe **Semester:** VII Sem. B.E. **Section:** A & B
Sub. Code: 8ME04 **Professional Elective** **Sub Name:** ROBOTICS

Sr.No	Date	Topics Covered	Sign of Faculty	Sign of HOD
1.	18·1·21	UNIT I : Fundamentals of Robotics- Introduction, Automation & Robotics.	ꝰ.	online
2.	21·1·21	Robot applications, Robotic systems.	ꝰ.	—II—
3.	22·1·21	Robot anatomy.	ꝰ.	—II—
4.	24·1·21	Configurations for Industrial Robots.	ꝰ.	—II—
5.	25·1·21	Work value for various robot anatomies,	ꝰ	—II—
6.	28·1·21	Joint types used in robots, , joint notation schemes,	ꝰ	—II—
7.	29·1·21	Robot wrists.	ꝰ	—II—
8.	31·1·21	Important Technical Specifications for Industrial Robots.	ꝰ.	—II—
9.	1·2·21	UNIT II : Robots end-effectors- classification of end-effectors- Grippers & Tools	ꝰ.	online
10.	4·2·21	Mechanical grippers, hooking or Lifting grippers,	ꝰ	—II—
11.	5·2·21	Grippers for molten metals, plastics, vacuum cups,	ꝰ	—II—
12.	7·2·21	Magnetic grippers, Electrostatic grippers.	ꝰ	—II—
13.	8·2·21	Multiple fingers gripper, internal & external grippers,	ꝰ.	—II—
14.	11·2·21	Drive systems for gripers,	ꝰ	—II—
15.	12·2·21	Active & Passive grippers.	ꝰ	—II—
16.	14·2·21	UNIT III : Robot drives & control- Drives Classification. Pneumatic and Hydraulic systems.	ꝰ	—II—
17.	15·2·21	Electric drives.	ꝰ.	—II—
18.	18·2·21	Robot controllers-servo and non servo systems.	ꝰ.	—II—
19.	21·2·21	Motion control of robots: Limited sequence and Point to Point Control	ꝰ.	—II—
20.	22·2·21	Motion control of robots: continuous path control.	ꝰ	—II—
21.	25·2·21	Teaching and programming methods for Robots.	ꝰ.	—II—
22.	26·2·21	Teaching and programming methods for Robots.	ꝰ.	—II—
23.	28·2·21	UNIT IV: Robot Sensors : Scheme of robotic sensors,	ꝰ.	—II—
24.	4·3·21	Contact type sensors touch, position sensors.	ꝰ	—II—
25.	5·3·21	Force, Torque, Velocity sensors,	ꝰ.	—II—
26.	7·3·21	Non-contact type sensors, electro-optical imaging sensors.	ꝰ.	—II—
27.	8·3·21	Proximity sensors, range imaging sensors,	ꝰ.	—II—
28.	12·3·21	Robot environment and robot input/output interfaces.	ꝰ	—II—
29.	14·3·21	Machine intelligence, safety measures in robots.	ꝰ.	—II—

Sr.No	Topics Covered	Remark
31.	Forward and reverse transformation of two DOF.	
32.	Three DOF, 2-D manipulator.	
33.	Homogeneous transformations.	
34.	*UNIT VI*: Quantitative Techniques for economic performance of robots.	
35.	Robot investment costs, robot operating expenses.	
36.	Methods of economic evaluation, method of pay-back period.	
37.	Return on investment method.	
38.	Discounted cash flow method.	

RECOMMENDED BOOKS :

TEXT BOOKS :

1) Robotics Technology & Flexible Automation by S.R.Deb, Tata Mcgraw Hill.
2) Industrial Robotics by M.P.Groover, McGraw Hill.

REFERENCE BOOKS:

1. Robotics for Engineering, Korean Yoram, McGraw Hill.
2. Robots & Manufacturing automation by Asfahal, C.Ray, John Wiley.
3. Robotic Engineering by Richard D. Klafter, PHI.

Department of Mechanical Engineering
Teaching Plan Session 2020-21

Name of Faculty: M.V. Gudadhe   **Semester:** VII Sem. B.E.   **Section:** A & B

Sub. Code: 8ME04 (Professional Elective-III)   **Sub Name:** ROBOTICS

Sr.No	Topics Covered	Remark
1.	*UNIT I:* Fundamentals of Robotics- Introduction, Automation & Robotics.	
2.	Robot applications, Robotic systems.	
3.	Robot anatomy.	
4.	Configurations for Industrial Robots.	
5.	Work value for various robot anatomies,	
6.	Joint types used in robots, , joint notation schemes,	
7.	Robot wrists.	
8.	Important Technical Specifications for Industrial Robots.	
9.	*UNIT II :.* Robots end-effectors- classification of end-effectors- Grippers & Tools	
10.	Mechanical grippers, hooking or Lifting grippers,	
11.	Grippers for molten metals, plastics, vacuum cups,	
12.	Magnetic grippers, Electrostatic grippers.	
13.	Multiple fingers gripper, internal & external grippers,	
14.	Drive systems for gripers,	
15.	Active & Passive grippers.	
16.	*UNIT III :* Robot drives & control- Drives Classification. Pneumatic and Hydraulic systems.	
17.	Electric drives.	
18.	Robot controllers-servo and non servo systems.	
19.	Motion control of robots: Limited sequence and Point to Point Control	
20.	Motion control of robots: continuous path control.	
21.	Teaching and programming methods for Robots.	
22.	Teaching and programming methods for Robots.	
23.	*UNIT IV:* Robot Sensors : Scheme of robotic sensors,	
24.	Contact type sensors touch, position sensors.	
25.	Force, Torque, Velocity sensors,	
26.	Non-contact type sensors, electro-optical imaging sensors.	
27.	Proximity sensors, range imaging sensors,	
28.	Robot environment and robot input/output interfaces.	
29.	Machine intelligence, safety measures in robots.	
30.	*UNIT V:* Robot Kinematics- Forward & reverse kinematics,	

Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- S S Kongre   Semester VIth   Section: A/B/C   [C]

Subject Code: 06ME04   Subject Name: Theory g machine II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	04/05/21	D.O.F. of mechanical vibration	&	
28	05/05/21	Introduction to longintudinal vibration	&	
29	06/05/21	Natural frequency of longintudinal vibration	&	online
30	10/05/21	Damped vibration with mass. spring	&	lecture
31	11/05/21	whirling of shaft & critical speed	&	
32	12/05/21	Problem base on longitudinal vibration	&	
33	13/05/21	Introduction to torsional vibration	&	
34	17/05/21	Natural freq. of 2 Rotor, 3-rotor system	&	
35	18/05/21	Natural freq. of geared system	&	
36	19/05/21	II Introduction to transverse vibration	&	
37	20/05/21	Natural frequency of transverse	&	
38	24/05/21	Problem base on transverse vibration	&	
39	25/05/21	Unit VIth Balancing of machinery static dynamics	&	
40	27/05/21	Balancing of rotating masses	&	
41	1/06/21	Balancing of rotating static & dynamics	&	
42	02/06/21	Balancing of single cylinder	&	
43	03/06/21	Partial balancing of Reciprocating masses	&	
44	07/06/21	Balancing of linkages	&	
45	08/06/21	Balancing Problems.	&	
46	09/06/21	Problems of Balancing.	&	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

IKulaip... ...korde

Prof.Ram Meghe Institute of Technology & Research, Badnera
Department of Mechanical Engineering
(Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- S.S. Kongve   Semester VI th sem Section: A/B/C   C

Subject Code: 6ME04   Subject Name: Theory of Machine II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	18/01/21	Unit I - static equilibrium & super position	Sc	?
02	19/01/21	For 2D static force Analysis (SFA)	d	?
03	20/01/21	Virtual work method.	d	
04	21/01/21	Numerical on static forc.Analysis	d	
05	25/01/21	Numerical on without static friction	d	
06	27/01/21	Introduction to hydrodynamic, boundry	d	
07	28/01/21	film lubrication, Rolling friction. lubrication	d	online lecture
08	01/02/21	Performance of bearing	d	
09	02/02/21	Unit II Introduction to D'Alembert's Principle	d	
10	03/02/21	thrust along connecting Rod, cylinder	d	
11	04/02/21	Dynamics equivalance, system CR bearing	d	
12	08/02/21	Introduction to inertia of connecting rod	d	
13	9/02/21	T-θ diagram q 4-stroke engive,	d	
16	10/02/21	2-stroke engive. Fluctuation of speed	d	
15	06/03/21	Problem on flywheel.	d	
16	07/04/21	Unit III Introduction to Gyroscope & its	d	
17	08/04/21	Effects of Gyroscope on Aeroplane. effects	d	
18	12/04/21	effects of Gyroscope on 2-wheeler ship	d	
19	15/04/21	4 wheelers and Numerial buse on its.	d	
20	19/04/21	Gyroscopic Couple Problems.	d	
21	20/04/21	vehicle dynamics - coefficient of adhasion	d	
22	21/04/21	resistance q vehicle. motion.	d	
23	22/04/21	braking q vehicle.	d	
26	23/04/21	relative brake attachemet.	d	
25	29/04/21	Unit IV Introduction to vibration	d	
26	03/05/21	Terms q vibratery motion.	d	

33	Problems			
34	**Torsional vibration**, single rotor systems, Two Rotor system			UNIT V
35	three rotor system			
36	geared systems			
37	Graphical method for multi rotor system.			
38	**Whirling of shaft & critical speeds**			
39	Whirling of shaft & critical speeds-Problems			
40	**Balancing of Machinery**:- Static, & dynamic unbalance			UNIT VI
41	balancing of rotating masses in same and different transverse planes			
42	Balancing of single cylinder, multi-cylinder V and radial engines			
43	Partial balancing of reciprocating masses			
44	Balancing of linkages & machine			
45	**Problems**			
46	**Problems**			
47	**Problems**			
48	**Problems**			
Total =				

Session: 2020 - 21

Teaching Plan

Subject Code: 6ME04   **Subject Name: Theory of Machine-II**

Lecture	Topic	Date	Unit
1	Static equilibrium, superstition principle		
2	**Static force analysis** applied to plane motion mechanisms		
3	Virtual work method		
4	Static force analysis without and with friction-problems		UNIT I
5	Static force analysis without and with friction-problems		
6	Static force analysis without friction-problems		
7	Theory of hydrodynamic lubrication, boundary lubrication		
8	Film lubrication, rolling friction		
9	Performance of bearing		
10	D'Alemberts Principle. Engine force analysis-piston effort		
11	thrust along connecting rod, side of cylinder, on the bearings, crank effort and turning moment on the crank shaft.		
12	Dynamic equivalent system of connecting rod		
13	Inertia of the connecting rod. Inertia force in reciprocating engines (graphical method).		UNIT- II
14	**Turning moment diagrams** for two stroke		
15	four stroke and multi cylinder engines		
16	fluctuations of speed & energy,		
17	**Flywheel** requirements		
18	**Space mechanism**:- Gyroscope, gyroscopic effect as applied to ship ,Aeroplane		
19	gyroscopic effect as applied to 4 wheeler, 2 wheeler		
20	Universal joint.		
21	**Vehical dynamics**:- Coefficient of adhesion,		UNIT -III
22	resistance to vehicle motion		
23	relative drive effectiveness		
24	braking of vehicles		
25	Concept and basic terms of vibratory motions, types of vibrations		
26	basic features or elements of vibrating systems, degree of reedom in mechanical vibratory system		
27	**Longitudinal vibrations**- Natural frequency free longitudinal vibrations by equilibrium, energy and Rayleigh method.		
28	Effect of inertia constraint in longitudinal vibrations		
29	Damped vibrations with mass, spring and dash pot. Definitions of logarithmic decrement, magnification factor, transmissibility, vibration isolation.		UNIT -IV
30	**Transverse vibrations**- natural frequency of free transverse vibrations. Effect of inertia constraints in transverse vibration		
31	Natural frequency of free transverse vibrations due to point load and uniform distributed load acting over a simply supported shaft		
32	Frequency of free transverse vibrations of a shaft subject to a no. of point loads by energy and Dunkerley's method		

Execution Plan

Name of Faculty:- S.C. Kangve   Semester Ⅴ th   Section: A/B/C   C
Subject Code: 5MES   Subject Name: Theory of machin-Ⅰ

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
25	28sep	Derivation of freudensteln's eq?.	&	7
26	29 sep	Numericals of freudensterins eq	&	
27	30 sep	chebeychevs eq & its problems	&	
		Unit-Ⅳ		
28	19-oct	Introduction to friction	&	
29	20-oct	Introduction to pivot & coller bearing	&	
30	21-oct	Problem on bearings.	&	
31	23-oct	friction clutches introduction & thier	&	online classes
32	26-oct	Problems on single & multiplate cluth type	&	
33	27-oct	Introduction to brakes & its types	&	
34	28-oct	Problem of brakes	&	
35	2-Nov	Dynamometers & its types	&	
		Unit-Ⅴ		
36	3-Nov	Introduction to cam & followers	&	
37	4-Nov	Cam terminology.	&	
38	6-Nov	Different motions of followers	&	
39	23-Nov	Problems on cam Profile.	&	
40	24-Nov	Problems on cam profile	&	
41	25-Nov	Problems on cam profile	&	
42	27-Nov	Introduction to special purpose mechanism	&	
43	1-Dec	steering gear mechanism	&	
44	2-Dec	Geneva wheels mechanism	&	
45.	4-Dec.	& straight line mechanism	&	
		Unit-Ⅵ		
46	7-Dec	Introduction to gears & their type	&	
47	8-Dec	Gear terminology-all terms include	&	
48	9-Dec	Numericals on Geere	&	
49	1-Jan	Introduction to Gear train	&	
50	2-Jan	Different types of Gear train	&	
51.	4-Jan	Numericals on Gear train	&	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.S. Kongre ___ Semester V th ___ Section: A/B/C ___ C

Subject Code: 5BE5 ___ Subject Name: Theory of Machine I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11 Aug	Unit I - Introduction to TOM-I, Basic of link, pair, Machine	&	
2	12 Aug	Different types link, kinematics pairs, types of joints & their relation	&	
3	14 Aug	Classification of kinematics pair, kinematic chain & inversion	&	
4	17 Aug	Inversion of four bar chain mechanism	&	
5	18 Aug	Inversion of double slider crank chain	&	
6	19 Aug	Single slider crank chain inversion	&	on
7	21 Aug	Kutzbach theory.	&	time
		Unit II		classes
8	24 Aug	Introduction to velocity analysis	&	
9	25 Aug	Relative velocity analysis	&	
10	28 Aug	Problems on velocity analysis.	&	
11	2-Sep	Kennedy's theorem & Numerical	&	
12	4-Sep	Instantaneous center of Rotation	&	
13	7 Sep	Numericals of ICR method.	&	
14	8 Sep	Acceleration Analysis.	&	
15	9 Sep	Relative pole method & numericals acceleration analysis	&	
16	11 Sep	Problems of acceleration analysis	&	
17	14 Sep	Analytical method of single slider	&	
18	15 Sep.	Klein's construction for single slider	&	
		Unit III		
19	16 Sep	Introduction synthesis of Mechanism	&	
20	18 Sep	Tasks type, number & dimension synthesis	&	
21	21 Sep	Graphical method Two & three position	&	
22	22 Sep	Graphical method of four position	&	
23	23 Sep	Graphical method of single slider	&	
24	25 Sep.	overlay method of four bar positions	&	

1. Study of inversion of four bar mechanism.
2. Study of inversion of slider crank mechanism.
3. Study of inversion of double slider crank mechanism.
4. Study of velocity analysis by relative velocity method/ pole technique.(2 Prob)
5. Study of acceleration analysis by relative acc. method. (2 Prob)
6. Study of brakes.
7. Study of clutches.
8. Study of dynamometer.
9. Study of Graphical layout of cam profile. (3 Prob.)
10. Study of gear trains
11. Problem in position synthesis.
12. Problem in input/output coordination
13. Computer aided synthesis of four bar mechanism.

The practical examination shall consist of viva-voce on the above syllabus & practical work.

Section - A

UNIT I :-

1. Introduction to study of mechanisms, machines, basic definitions, different types of links, kinematic pairs. Grashof's law- class-I and class -II mechanisms. Grubler's criterion. Kutrbach's theory Inversions of four bar, single slider, double slider mechanisms,.

2. Kinematic analysis of mechanisms:- Transmission angle, Mechanical Advantage, coupler curve and their properties, radius of curvature of coupler curves.. (8 Hrs)

UNIT II :-

1. Velocity analysis:- Relative velocity method, method of equivalent mechanisms, Instantaneous centre of rotation method, body and space centroids,.

2. Acceleration analysis:- Relative acceleration method, anal,tical method and, Klein's construction for slider crank mechanism. (10 Hrs)

UNIT III :-

Synthesis of Mechanisms:- Introduction to type, number and dimensional synthesis, graphical method of two position, three position and four position synthesis for input output co-ordination, Overlay method, Freudenstien's equation, Blosch's method.   (7 Hrs)

Section - B

UNIT IV :-

Frictional torque in pivot and collar bearing. Brakes, Clutches, and Dynamometers: types, constructional details, operation & calculation of leading dimensions.   (8 Hrs)

UNIT V :-

Special purpose mechanisms:- Steering mechanisms, Geneva wheel mechanism.
Cams:- Introduction, types of cam & follower, different motions of followers, graphical layout of cam profiles, cam with specified contours.   (8 Hrs)

UNIT VI :-

I) Gear :- Introduction, terminology, gear tooth profiles, involumetry, interference, spur, gears, spiral gears, and its efficiency,

II) Gear Trains:- Types of gear trains, speed ratio applications. (8 Hrs)

Books Recommended:

Text Books:

1)   Theory of Machines, S.S.Ratan, Published by Tata Mc Graw Hill.

2)   Theory of Machines and Mechanisms, J.E.Shigley, Uicker and Gordon, Published by Oxford University press-New York.

3)   Theory of Machine, R.S.Khurmi and Gupta J.K., Published by Eurasia Publishing house-N Delhi.

Reference Books:

1)   Theory of Machines, V.P.Singh, Published by Dhanpat Rai-N Delhi.

2)   Theory of Machines, P.L.Ballaney, Published by Dhanpat Rai and sons-N Delhi.

3)   Theory of Machines and Mechanisms, Rao J.S. and Gupta K.N., Published by Wiley Eastern-N Delhi.

4)   Machines and Mechanisms (applied kinematic analysis), David H. Myszka, Published by Pearson Education -Asia.

5)   Mechanisms Design (analysis and synthesis), Arthur G.Erdman and George N.Sandoor, Published by Prentice Hall Inc.

6)   Theory of Machines and Mechanisms,Ghosh and Amitabh,Published Affiliated East West Press N-Delhi.

5ME09   **Theory of Machines-I Lab**

PRACTICALS:- At least eight practicals from the below list shall be performed.

Teaching Plan
5SM5 Theory of Machines-I
V Semester Mechanical Engineering 2012-13

LN	Unit	Topic	Remarks
1.	I	1. Introduction, definitions of link, pair, machine, mechanism	
2.		Different types of links, kinematic pairs; introduction to ball screws and linear bearings.	
3.		Classification of kinematic pairs, kinematic chain and inversion, Grashof's law and class-I and class-II mechanisms	
4.		Inversions of quadric cycle chain, Inversions of single slider-crank chain	
5.		Inversions of double slider crank chain	
6.		Grubler's criterion and Kutzbach theory	
7.		2 Kinematic analysis of mechanism: Transmission angle and its significance, Mechanical Advantage, Coupler curves and its properties and applications, Radius of curvature of coupler curves.	
8.	II	1. Velocity Analysis: Introduction, Methods of velocity analysis, Graphical and analytical	
9.		Relative velocity method	
10.		Problems on relative velocity method	
11.		Instantaneous centre of rotation, Kennedy's theorem, location of ICRs	
12.		Problems on ICR method	
13.		Concept of equivalent mechanism and problems on it, Transmission ratio	
14.		2. Acceleration analysis: Relative acceleration method and pole method	
15.		Problem on acceleration analysis	
16.		Coriolis' component acceleration and problems on it	
17.		Klein's construction for slider crank and four bar mechanism	
18.		Analytical method for slider crank mechanism	
19.	III	Synthesis of Mechanism: Introduction, type, number & dimensions synthesis	
20.		Graphical methods of two position and three position synthesis	
21.		Graphical method of four position synthesis, synthesis for input-output co-ordination	
22.		Overlay method,	
23.		Freudenstien's equations	
24.		Synthesis for specified angular velocities and acceleration	
25.	IV	Friction a) Friction angle and friction circle and friction axis	
26.		b) Frictional torque in pivot and collar bearing	
27.		Problems on bearings	
28.		c) Brakes-types, construction, operation and calculations	
29.		Problems on brakes	
30.		Clutches-types, construction, operation and calculations	
31.		Problems on clutches	
32.		Dynamometer-types, construction, operation and calculations	
33.		Dynamometers contd.	
34.	V	Special purpose mechanism: a) Straight line mechanisms	
35.		Steering mechanism	
36.		Double dwell, intermittent rotary motion mechanism	
37.		Quick return, toggle mechanism.	
38.		b) Cams:-Introduction, types of cam and follower, pressure angle	
39.		Different motions of followers	
40.		Graphical layout of cam profiles	
41.		Graphical layouts contd.	
42.		Cams with specified contours	
43.	VI	Gears: Introduction, terminology, gear tooth profiles	
44.		Involumetry, spur and helical gears	
45.		Spiral gears and its efficiency	
46.		Bevel and worm gears	
47.		Gear Trains: types of gear trains	
48.		Speed ratio applications	
49.		Problems on gear trains	

Execution Plan

Name of Faculty:-_____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	28)10	Types of gauges - plug & snap	4	—"—
28	29)10	Introduction to metrology.	4	—"—
29	04)11	Mechanical comparators	4	—"—
30	05)11	Electrical comparators ⎫ Linear	4	—"—
31	10)11	Optical & pneumatic comparators measurements	4	—"—
32	11/11	Angular Measurment Instruments ⎭	4	—"—
33	15)11	Angular measurment Instruments	4	—"—
34	18)11	Thread measurments	4	—"—
35	26)11	Thread measurments	4	—"—
36	01)12	Introduction to Gear measurment	4	—"—
37	02/12	Instruments used for gear measurments	4	—)—
38	07)12	Optical dividing head	4	—"—
39	09)12	Auto collimator, tool makers microscope	4	—)—
40	10)12	Interferometry, flatness testing	4	—"—
41	15)12	Squarness testing	4	—"—
42	16)12	Co-ordinate measuring m/cs.	4	—"—
43	22)12	Numericals on control charts	4	—"—
44	23)12	Numericals on limits & fits.	4	—"—
45			4	—"—
46			4	
47			4	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- **S S Deshmukh**   Semester **V**   Section: A/B/C ✓ | C |

Subject Code: **05ME02**   Subject Name: ~~Production~~ Production Technology.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11/08/20	Introduction to quality & quality control	₤	ON Line
2	12/08/20	Quality of design & conformance	₤	—"—
3	17/08	Cost of quality & value of quality	₤	—"—
4	19/08	Concept of TQM & quality assurance	₤	—"—
5	24/08	Concept of variation, variable & attribute data	₤	—"—
6	25/08	Measures of central tendency.	₤	—"—
7	27/08	Concept of universe & population & ND curve	₤	—"—
8	02/09	Control charts for variables	₤	—"—
9	03/09	Control charts for attributes	₤	—"—
10	09/09	Process capability	₤	—"—
11	10/09	Sampling plans	₤	—"—
12	16/09	Operating characteristics curve	₤	—"—
13	21/09	Quality circle.	₤	—"—
14	22/09	Introduction to work study.	₤	—"—
15	23/09	Definitions of work study	₤	—"—
16	24/09	Method study	₤	—"—
17	28/09	Process charts	₤	—"—
18	29/09	Principles of motion Economy	₤	+"—
19	01/10	Work measurment	₤	—"—
20	05/10	Standard time estimation of allowances	₤	—"—
21	07/10	Standards of measurments	₤	—"—
22	19/10	Introduction to Limits, fits & gauges	₤	—"—
23	20/10	Terminology of limits, fits & gauges	₤	—"—
24	21/10	Numericals on Limits & fits	₤	—"—
25	26/10	Concept of interchangeability, tolerances	₤	—"—
26	27/10	Design of limit gauges	₤	—"—

Unit V:

Lecture No.	Topic to be Covered
1	Linear measurement: mechanical comparator(principle, operations and applica
2	Linear measurement: electrical comparator(principle, operations and applicatic
3	Linear measurement: optical, pneumatic comparators(principle, operations and applications)
4	Angular measurements: vernier, optical, bevel protractor
5	Angular measurements: universal bevel protector, Sine bar level clinometers
6	Angular measurements: taper gauges
7	Thread measurement: screw thread limit and fit limits gauging of screw threads
8	Thread measurement: screw thread limit and fit limits gauging of screw threads

Unit VI:

Lecture No.	Topic to be Covered
1	Gear measurement : alignment error
2	master gear, Parkinson tester
3	Study and use of optical dividing head
4	Study and use of auto collimator, tool makers microscope
5	Interferometry, flatness testing

Unit III:

Lecture No.	Topic to be Covered
1	Definition & Basic principles of work study
2	Method study: introduction, objective, procedure
3	Process charts: flow process charts, Operation process chart
4	Principles of motion economy, multiple activity chart
5	Two handed process chart, simo chat
6	Work measurement : definition, techniques, time study, rating system
7	Work measurement : allowances, std, time estimation, PMTS, MTM

Unit IV:

Lecture No.	Topic to be Covered
1	Standards of measurements: line standards, end standard, wave length standard
2	Limits, fits and gauges : terminology of limits, Fits and gauges
3	Limits, fits and gauges : terminology of limits, Fits and gauges
4	Problems on limits & Fits
5	Concept of interchangeability, allowance, tolerance
6	Indian Standard Specification for limits, fits and gauges, B.S. System
7	Limit gauging - design of Go, No Go gauges
8	Limit gauging - design of Go, No Go gauges

Dept. of Mechanical Engineering

Teaching Plan

Class: V[th] Semester

Subject: Production Technology

Unit I:

Lecture No.	Topic to be Covered
	Introduction to subject
	Concept of quality and quality control
	Quality of design and quality of conformance, Quality characteristics
	Cost of quality & Value of quality, Specification of quality, quality control & inspection
	Concept of TQM & Quality assurance
	Concept of variation, variable and attribute data, Frequency distribution
	Measures of Central tendency-Mean, mode & median
	Measures of dispersion. -Range, std. deviation & variance

Unit II:

Lecture No.	Topic to be Covered
	Concept of universe and population, Normal distribution curve
	Control charts for variables
	Control charts for variables, process capability
	Control charts for attributes
	Control charts for attributes, comparison between variable charts and attribute charts
	precision & accuracy, Sampling plans
	Sampling plans, Quality circle
	Operating Characteristic curve

Odd/Even Semester 2020-21)

Execution Plan

Semester____   Section: A/B/C

Name of Faculty:-_____

Subject Code: _____   Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	0J/05/21	Indexing	₵	—11—
28	08/05	Gear producing m/les	₵	—11—
29	13/05	Operations of power hack saw	₵	—11—
30	15/05	Basic kinds of grinding	₵	—11—
31	21/05	Types of grinding m/ls	₵	—11—
32	22/05	Abrasives, bonds & binding process	₵	—11—
33	27/05	Grit, grade, structure of grinding wheel	₵	—11—
34	28/05	loading, dressing & Turning of grinding wheel	₵	—11—
35	28/05	Introduction, Types & Operations of shaper	₵	—11—
36	29/05	Introduction, Types & operations of planner	₵	—11—
37	29/05	Ultrasonic m/cing process	₵	—11—
38	03/06	Electron beam m/cing	₵	—1—
39	03/06	Laser beam m/cing	₵	—11—
40	04/06	Electro chemical m/cing	₵	—11—
41	11/06	Electric discharge m/cing	₵	—11—
42	12/06	Tool geometry (Revision)	₵	—11—

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S. S. Deshmukh   Semester IV   Section: A/B/C   C

Subject Code: 4ME 03   Subject Name: Manufacturing Technology.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21/01/21	Introduction to Theory of metal cutting		ON Line
2	22/01	Methods of metal cutting, Chip formations		-"-
3	23/01	Types of Chips & conditions favourable		-"-
4	28/01	Tool materials		-"-
5	29/01	cutting forces		-"-
6	30/01	machinability, cutting fluids		-"-
7	04/02	Chip thickness ratio		-"-
8	06/02	Introduction to centre lathe		-"-
9	11/02	Types of Centre lathe & parts		-"-
10	12/02	Back gear arrangements, All gear drive		-"-
11	13/02	Accessories of lathe		-"-
12	18/02	Half nut mechanism		-"-
13	20/02	Taper turning attachments		-"-
14	25/02	·Introduction to Capstan & Turret lathe		-"-
15	27/02	Comparison with centre lathe		-"-
16	04/03	Indexing mechanism, Bar feeding mechanisms		-"-
17	05/03	CNC Turning operations.		+"-
18	06/03	Introduction & Types of drilling m/cs		-"-
19	12/03	Specification & parts of drilling m/c		-"-
20	15/04	Types of drilling m/cs		-"-
21	17/04	Types of drills & operations		-"-
22	22/04	Introduction & Types of Boring m/c		-"-
23	23/04	Types of Boring m/cs. reaming		-"-
24	24/04	Broaching m/cs & reaming m/c		-"-
25	29/04	Basics of milling m/c.		-"-
26	6/05	Types and parts of milling m/c		-"-

		Study of various parts of slotter	
39		Unconventional machining processes – Introduction	
40		Mehanical processes- Ultrosonic machining	
41		Principle, application,process parameters etc.	
42	VI	Thermal processes – EBM	
43		LBM,PAM – principles ,applications etc	
44		LBM,PAM – principles ,applications etc	
45		EDM – parameters, principles	
46		Applications, material removal process etc.	

Teaching plan

IVth Sem.B.E.Mechnical Engg.

Subject-Manufacturing Technology

L.N.	Unit no.	Topics	Remarks
1		Theory of metal cutting, mechanics	
2		Tool material, tool geometry	
3		Tool geometry, classification	
4	I	Tool life and wear	
5		Calculation of cutting forces	
6		Machinability, cutting fluid	
7		Chip thickness ratio	
8		Merchant circle	
9		Introducion of contruction and parts of centre lathe	
10		Introduction to operation and accessories of centre lathe	
11		Introduction to capstan and turret lathe	
12		Indexing mechanism, bar feeding mechanism	
13	II	Machine tool classification	
14		Numerical approach	
15		Taper turning and screw cutting	
16		Basic concept of CNC-Introduction	
17		Working principle	
18		CNC Turning operation	
19		Drilling operation-General purpose	
20		Mass production	
21		Special purpose drilling machine	
22	III	----------------//-------------//-------------	
23		Introduction to boring machine and types	
24		Harrizontal, vertical and jig boring machine	
25		Intro. to broaching machine	
26		Types and terminology	
27		Calculation of machining time for milling	
28		Milling machine-Types, types of cutters	
29	IV	Dividing head, compound	
30		Differential indexing	
31		Gear producing machine	
32		Types of machines	
33		Grinding machines-bench grinder	
34		Surface grinders, centreless grinders	
35	V	Types of bonds and abrasives	
36		Study of various parts of shaper	
37		Study of various parts of planer	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty: Saurabh S. Bhange Semester 3rd   Section: A/B/C   B

Subject Code: 3ME02   Subject Name: Mechanics of Material

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	27/10/20	Volume change in thin cylinders		Online Lecture
30	28/10/20	Thin sphere		—"—
31	2/11/20	Thick cylinder (Numericals)		—"—
32	3/11/20	Strain energy under tension		—"—
33	4/11/20	Strain energy with impact load		—"—
34	9/11/20	Principal stress, Principal planes		—"—
35	10/11/20	Biaxial stress system		—"—
36	16/11/20	Mohr's circle of stresses		—"—
37	17/11/20	Deflection in beam with pt. load		—"—
38	18/11/20	—"—		Sign of HOD
39	23/11/20	Deflection in beam with UDL		—"—
40	24/11/20	Macauley's method (Num.)		—"—
41	25/11/20	—"—		—"—

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R P---

Execution Plan

Name of Faculty: Saurabh S. Bhage Semester 3rd   Section: A/B/C   B

Subject Code: 3ME02   Subject Name: Mechanics of Material

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11/8/20	Introduction to subject		Online lecture
2	12/8/20	Concepts of stresses & strains		-u-
3	17/8/20	Biaxial & triaxial loading		-u-
4	18/8/20	Elastic constants (Numericals)		-u-
5	19/8/20	Stress - Strain diagram, F.O.S.		-u-
6	24/8/20	Stresses in compound bars (Num.)		-u-
7	25/8/20	—"—		-u-
8	31/8/20	Temperature stresses (Numericals)		-u-
9	2/9/20	—"—		-u-
10	7/9/20	—"—		1:00
11	8/9/20	Types of beams & loading		-u-
12	9/9/20	Simply supported beam - Pt. load (Num)		-u-
13	14/9/20	—"—		-u-
14	15/9/20	Simply supported beam - UDL (Num.)		-u-
15	16/9/20	Simply supported beam - UDL + Pt. load (Num)		-u-
16	21/9/20	Cantilever with UDL (Num.)		-u-
17	21/9/20	Cantilever with pt. load (Num.)		-u-
18	22/9/20	Bending theory		-u-
19	28/9/20	Section modulus & Moment of resistance		-u-
20	23/9/20	Bending stresses, leaf spring		-u-
21	30/9/20	Torsion theory & assumptions		-u-
22	5/10/20	Torsion in solid shaft		-u-
23	6/10/20	Torsion in hollow shaft		-u-
24	7/10/20	Power transmitted by shaft		-u-
25	19/10/20	Closed coiled spring		-u-
26	20/10/20	Shear stress in rectangular shaft		-u-
27	21/10/20	Shear stress in circular shaft		-u-
28	26/10/20	Thin cylinders (Numericals)		-u-

Session Plan

Sub. MECHANICS OF MATERIALS (3MEJ2)

Lecture No.	UNIT DESC.	TOPIC DESCRIPTION
1		Concept of direct, bending and shear stresses and strains stress-strain relations
2		Biaxial and triaxial loading
3		Elastic constants and their relationship
4	Unit 1	Stress-strain diagrams and their characteristics for mild steel, and other metals, factor of safet
5		Stresses and strains in compound bars
6		Temperature stresses in simple restrained bars
7		Temperature stresses in compound bars
8		Beams, loading and support conditions
9		Bending moment and shear force for simply supported beams
10		Bending moment and shear force for cantilever beams
11	Unit 2	Relation between shear force, bending moment and loading intensity
12		Theory of simple bending, section modulus, moment of resistance
13		Bending stresses in solid & hollow shaft
14		Leaf springs
15		Theory of torsion & assumptions, derivation of torsion equation
16		Polar modulus, stresses in solid & hollow circular shaft
17	Unit 3	Stresses in solid & hollow circular shaft
18		Power transmitted by shaft
19		Closed coiled helical spring with axial load
20		Shear stress distribution on beam rectangular and circular cross sections
21		Thin cylinders subjected to internal pressures
22		Thin cylinders subjected to internal pressures
23	Unit 4	Thick cylinders subjected to internal pressures
24		Thick cylinders subjected to internal pressures
25		Thin spherical shells subjected to internal pressures
26		Strain energy under uniaxial tension with impact loads
27		Strain energy under uniaxial compression with impact loads
28	Unit 5	Instantaneous stresses
29		Biaxial stress system, principal stresses, principal planes
30		Biaxial stress system, principal stresses, principal planes
31		Mohr's circle of stresses
32		Deflection in statically determinate (simply supported) beams subjected to point loads
33	Unit 6	Deflection in statically determinate (simply supported) beams subjected to point loads
34		Deflection in statically determinate (simply supported) beams subjected to uniformly distributed loads
35		Moments by Macauley's method.
36		Moments by Macauley's method.

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Saurabh S. Bhaiya Semester 4th Section: A/B/C [A]

Subject Code: 4ME1 Subject Name: Material Science

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	4-5-21	Retained Austenite, Hardenability		Online lecture
30	5-5-21	Surface hardening processes		online lecture
31	10-5-21	Hot & cold working, Work hardening		online lecture
32	11-5-21	Recovery, Recrystallisation & Grain growth		online lecture
33	12-5-21	Mechanical working effects slip & twin		online lecture
34	17-5-21	Powder Metallurgy - Concept, Methods		online lecture
35	18-5-21	Sintering, Manu. of porous bearing		online lecture
36	13-5-21	Advt. limitation & appli. of P.M.		online lecture
				Sign of HOD

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty: Saurabh S. Bhaye   Semester 4th   Section: Ă/B/C   [A]

Subject Code: 4ME1   Subject Name: Material Science

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18-1-21	Basic concepts in metallurgy		Online Lecture
2	19-1-21	Classification of materials & their appli.		Online Lecture
3	20-1-21	Structure of metals & alloys.		Online Lecture
4	25-1-21	Structure of metals & alloys.		Online Lecture
5	27-1-21	Alloys, Solid Solutions, lever rule		Online Lecture
6	1-2-21	Nucleation & grain growth		Online Lecture
7	2-2-21	Study of binary invarical diag.		online Lecture
8	3-2-21	"		Online Lecture
9	8-2-21	Constru. of Fe.-C diag.		Online Lecture
10	9-2-21	Microstructures of slowly cooled steels		Online Lecture
11	10-2-21	Structure property relation		Online Lecture
12	15-2-21	Composite materials, it's advt.		Online Lecture
13	16-2-21	Classi. of alloy steels & alloying elements		Online Lecture
14	17-2-21	Effect of alloying elements.		Online Lecture
15	22-2-21	Alloying elements & their effects on prop.		Online Lecture
16	23-2-21	OHNS steel, HCHC, Ball bearing steel		Online Lecture
17	24-2-21	Ferritic, Martensitic & Austenitic steel.		Online Lecture
18	1-3-21	Weld decay in steels		Online Lecture
19	2-3-21	Factors affecting CI, Maurer's diagram		Online Lecture
20	3-3-21	Solidification of white & grey CI, Malle.		Online Lecture
21	8-3-21	White, grey, nodular & malleable CI.		Online Lecture
22	9-3-21	Brasses & bronzes- Types & appli.		Online Lecture
23	10-3-21	Alloys of aluminium, lead, zinc &tin.		Online Lecture
24	12-4-21	Bearing matl. Seasonal cracking.		Online Lecture
25	19-4-21	Annealing- it's types, Normalizing.		Online Lecture
26	20-4-21	Tempering, Hardening, S-curve		Online Lecture
27	21-4-21	Pearlite, bainite & martensite transport		Online Lecture
28	3-5-21	Quenching - media & it's severity		Online Lecture

25		Annealing- Types of Annealing Processes, Normalizing
26		Tempering, Hardening, Iso-thermal transformation diagrams (S-curve)
27	Unit 5	Super imposition of continuous cooling curves on 's' Curve, pearlite, bainite and martensite transformation
28		Quenching media, severity of quench, Austempering, Martempering and patenting
29		Retained austenite and sub-zero treatment. Hardenability-Jominy End Quench Test
30		Carburizing, Nitriding, Cyaniding, Flame and Induction Hardening
31		Hot and cold working, Relative advantages and disadvantages, study of stress strain curve
32		Luder's bands, Work hardening, strain Ageing; Recovery, Recrystallization and grain growth.
33	Unit 6	Metallurgical factors affecting various Mechanical working processes, preferred orientation, Deformation mechanisms- Slip& twining, critical resolved shear stress
34		Powder Metallurgy: Concept, Methods of Manufacture of metal powders, compaction Process- Single die and double die, sintering, stages of sintering
35		Manufacture of porous bearings & cemented carbide tip tools by P.M.T.
36		Advantages, limitations and applications of powder metallurgy

Session Plan

Sub.- Engineering Metallurgy (4ME02)
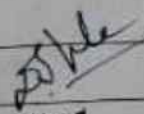
Lecture No.	UNIT DESC.	TOPIC DESCRIPTION
1		Basic concept of process metallurgy, physical metallurgy, and mechanical metallurgy
2		Classification of materials & their application
3		Structure of metals and alloys
4	Unit 1	Structure of metals and alloys
5		Formation of Alloys, Solid solutions, types and their formation, lever rule for phase mixtures. Solidification of pure metals,
6		Nucleation and growth, ingot structure, dendritic solidification
7		Study of binary equilibrium diagram and invariant reactions
8		Construction and study of Iron-carbon Equilibrium Diagram, Critical temperatures
9	Unit 2	Microstructure of slowly cooled steel
10		Microstructure of slowly cooled steel
11		Estimation of carbon from microstructure, structure property Relation
12		Introduction to composite materials, advantages and applications
13		Purpose of alloying, Classification of alloy steels, Classification of alloying elements
14		Effect of alloying elements on eutectoid composition, eutectoid temperature and on S-curve
15		Alloying elements and their effect on properties of steels
16	Unit 3	OHNS steels, Hadfield's Manganese steels, HCHC, Ball Bearing Alloy Steel
17		High speed steels, their heat treatments and applications
18		Ferritic, Austenitic and Martensitic steels, their properties and applications, Weld decay in stainless steel
19		Cast irons : Factors governing condition of carbon in cast iron, Maurer's diagram
20		Solidification of grey and white cast iron, Malleabalizing
21	Unit 4	Constitution and properties of white, gray, Nodular and Malleable cast irons, their applications, Alloy cast irons
22		Types, Properties and uses of Brasses and Bronzes
23		Important alloys of Aluminium, Lead, Tin and Zinc, their applications
24		Bearing materials, Season cracking, precipitation hardening

Execution Plan

Name of Faculty:- Dr. S. P. Patil   Semester TV   Section: A/B/C

Subject Code: 4MD02   Subject Name: M.S.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	05 Apl.	Non fe metal & alloys, Types	$\pounds$	
28	07	Properties & uses of brz, Bronz etc	$\pounds$	
29	19	Imp. alloys of Al, lead tin Zn apph	$\pounds$	
30	03 May	Bearing matl. Pre hardning	$\pounds$	
31	04	Prin. of HT, anneal., normalizing	$\pounds$	
32	05	Tempering, Isothermal trans.	$\pounds$	●
33	10	Super impst of c. cooling on survie	$\pounds$	
34	11	Perlite, tainitle marlensite trans	$\pounds$	
35	12	Quenting, media, severity of Q.	$\pounds$	
36	17	Austempering, martempering	$\pounds$	
37	18	Retained austenite & s.2. treat	$\pounds$	
38	19	Surface hardng, Carburizing	$\pounds$	
39	24	Mech. working H & c, adv. Dist.	$\pounds$	
40	25	St. strain curve, work hardening	$\pounds$	
41	31 May	Strain aging, recrystn grain growth	$\pounds$	●
42	01. June	Defn Mech, critical resolver sh. st.	$\pounds$	
43	02	Powder met concept, Method of Manf	$\pounds$	
44	07	Compact process, sintering	$\pounds$	
45	08 Jun	Porous Bearing manf. Cem. Carb tip	$\pounds$	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Dr. S. P. Patil   Semester IV   Section: A/B/C

Subject Code: 4ME02   Subject Name: Material Science

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18·01·21	Intro to matt., Basic concept Da	&	
2	19·01	Physical & mechanical Matl	&	
3	20 Jan	classn of matl & appln, Stru. of metal	&	
4	25	form of alloys, solid soln, types of formn	&	
5	01 Feb	lever rule for phase mixture	&	
6	02	solidifn of pure metal & nucleatn	&	
7	03	Ingot struct., deutnitic solidfn	&	
8	15	Bionary equ. dia, inuerdent rean	&	
9	16	Met problem	&	
10	17	Counstr & study of Iron equ. Dia 1	&	
11	22	—— " —— " —— 2	&	
12	23	Critical temp, microst. of cooled st.	&	
13	24	Estn of carbon from microst.	&	
14	01 Mar	structure propert relatn	&	
15	02	Adits & applns.	&	
16	03	Alloys steel, purpose, classn of alloy	&	
17	08	classn of alloys element, effect eutectod.	&	
18	09	Eutectoid temp & S. curve, alloy element	&	
19	10	effect on propt. of steel, OHNS steel.	&	
20	15	Hadfield steel, HSS, Heat treat appt	&	
21	16	ferritic, austenitic & Matl. steel	&	
22	22	property & appln, met. steel	&	
23	23	C.I., condn of carbon in CI	&	
24	24	Mauron dia, solidifn of G. & W.CI	&	
25	30	Mellablsn, properties of w & G CI	&	
26	31 Mar	Nodular & Melleable CI, appln, Alloy CI	&	

Lecture No.	Topic
Unit 4	
1	Cast irons : Factors governing condition of carbon in cast iron
2	Maurer's diagram, Solidification of grey and white cast iron
3	Malleabalizing, Constitution and properties of white, grey
4	Nodular and Malleable cast irons, their applications, Alloy cast irons
5	Non Ferrous Metals and Alloys
6	Types, Properties and uses of Brasses and Bronzes
7	Important alloys of Aluminium, Lead, Tin and Zinc, their applications
8	Bearing materials, Season cracking, precipitation hardening

Lecture No.	Topic
Unit 5	
1	Principles of Heat Treatment: - Annealing
2	Normalizing, Tempering Iso-thermal transformation diagrams(S-curve)
3	super imposition of continuous cooling curves on 's' Curve
4	pearlite, bainite and martenste transformation
5	Quenching media, severity of quench
6	Austempering,
7	Martempering and patenting
8	Retained austenite and sub-zero treatment. Hardenability

Lecture No.	Topic
Unit 6	
1	Methods of surface hardening: Carburizing, Nitriding, Cyaniding, Flame and Induction Hardening
2	Mechanical working of Metals: - Hot and cold working, Relative advantages and disadvantages
3	study of stress strain curve, Luder's bands, Work hardening
4	strain Ageing; Recovery, Recrystallization and grain growth. Metallurgical factors affecting various Mechanical working processes
5	preferred orientation, Deformation mechanisms-Slip& twining, critical resolved shear stress
6	Powder Metallurgy: Concept, Methods of Manufacture of metal powders
7	compaction Process- Single die and double die, sintering, stages of sintering
8	Manufacture of porous bearings & cemented carbide tip tools by P.M.T. Advantages, limitations and applications of powder metallurgy

Teaching Plan

Sub – 4ME02 MATERIAL SCIENCE

Lecture No.	Topic
Unit 1	
1	Introduction to metallurgy: Basic concept of process metallurgy
2	physical metallurgy, and mechanical metallurgy
3	Classification of materials & their application
4	Structure of metals and alloys, formation of Alloys
5	Solid solutions, types and their formation
6	lever rule for phase mixtures
7	Solidification of pure metals, nucleation and growth
8	ingot structure, dendritic solidification

Lecture No.	Topic
Unit 2	
1	Study of binary equilibrium diagram and invariant reactions
2	Construction and study of Iron-carbon Equilibrium Diagram 1
3	Construction and study of Iron-carbon Equilibrium Diagram 2
4	Critical temperatures, Microstructure of slowly cooled steel
5	Estimation of carbon from microstructure
6	structure property relation
7	Introduction to composite materials
8	advantages and applications

| Lecture No.	Topic
Unit 3	
1	Alloy Steels: Purpose of alloying
2	Classification of alloy steels, classification of alloying elements
3	Effect of alloying elements on eutectoid composition
4	Eutectoid temperature, and on the S curve
5	alloying elements and their effect on properties of steels, OHNS steels
6	Hadfield'S Manganese steels, High speed steels, their heat treatments and applications
7	Ferritic, Austenitic and Martensitic stainless steels
8	properties and applications, weld decay in stainless steel

Name of Faculty:- Dr. S. P. Patil   Semester III   Section: A/B/C

Subject Code: SME 02   Subject Name: M.P.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	29 oct	Tube, wire, spinning op^n	$	
28	31	Spinning, embossine, bendin op^ns	$	
29	05 Nov	Rotary swaging rolling & types	$	
30	06	Joining process, Mech. joining	$	
31	07	fastining, revetting, soldering brazing	$	
32	19	Arc welding principle & process	$	●
33	20	Gas welding, electrodes	$	
34	21	TIG MIG process	$	
35	26	Swelding gasses, Appd^n defects	$	
36	27	Submerged Arc welding	$	
37	28	Resist^n welding	$	
38	03 Dec	Spot welding op^ns	$	
39	04	Proj^n welding, butt welding	$	
40	05	friction welding, forge welding	$	
41	10	Plasma arc, thermit welding	$	
42	11	Defects, testing, insp^n of welding	$	●
43	12	Ultrasonic, Electron beam laser weld.	$	
44	17	Surface treatment, electroplating	$	
45	18	Metal spraying, shot peening	$	
46	19	Electroforming, polishing op^ns	$	

Head
of Mechanical Engineering

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)
Execution Plan

Name of Faculty:- Dr. S.P. Patil   Semester III   Section: A/B/C

Subject Code: GME02   Subject Name: M.P.
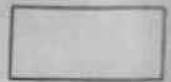
Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	13 Aug	Intro to M P & classifn	₰	
2	14	Pattern making, matl, tools	₰	
3	19	Allowances, types of pattern	₰	
4	21	Moulding sand, preparatn	₰	
5	26	Moulding process, core making	₰	
6	27	core boxes, Sand casting process	₰	
7	28	Basic Mu. & termin. of Sand casting	₰	
8	03 Sep	Gating system, D/n, risers.	₰	
9	07	Tech. of melting, M. furnace crucible	₰	
10	10	Pit open hearth, gas fired	₰	
11	11	Cupola opn, Electric furnace	₰	
12	12	Direct, Ind, Inductn furnace	₰	
13	17	Defection casting, remedies	₰	
14	18	various defects & errors	₰	
15	19	Inspn & testing of casting	₰	
16	24	casting process, princpl. & applns	₰	
17	25	Permanent mould casting	₰	
18	26	slush, shell casting process	₰	
19	01 Oct	Investment, vaccume process	₰	
20	03	Centrifugal & continuous casting	₰	
21	08	Die casting, gravity.	₰	
22	09	Pressure casting, cleaning of C.	₰	
23	10	Modernisn & mechanisn of foundry	₰	
24	22	Mech. working, Hot cold working	₰	
25	23	Extrusion, piercing, pipe & tubing	₰	
26	24	Seamless pipe, shearing opn	₰	

Lecture No.	Topic
Unit 4	
1	Mechanical working of metals
2	Principle of hot and cold working process and its types
3	Extrusion, piercing, pipe and tube production
4	manufacture of seamless pipe and tubing
5	Shearing operations, tube drawing, wire drawing
6	spinning, embossing and coining, squeezing and bending operations
7	rotary swaging, load estimation for bulk forming (forging and drawing)
8	rolling and types of rolling mills

Lecture No.	Topic
Unit 5	
1	Joining processes:- Mechanical joining processes
2	Mechanical fastening, riveting, soldering, brazing Welding
3	Types of welding processes-Arc welding: principle and working
4	Gas welding- principle and working Types and purpose of Electrodes
5	Electrode coatings(flux). TIG & MIG processes – Working principles and its applications
6	shielding gases, MIG-Spray transfer and dip transfer processes

Lecture No.	Topic
Unit 6	
1	Submerged arc welding
2	resistance welding :- Heat generation in resistance welding
3	operational characteristics of resistance welding processes such as spot welding
4	projection welding, butt welding
5	Principle of operation of friction welding, forge welding
6	plasma arc, thermit welding
7	Welding defects, Testing and Inspection of welds
8	Ultrasonic, Electroslag, Electron Beam, laser welding, weldability. Surface Treatment-Electroplating, electroforming
9	iodising, metal spraying, shot peening, polishing, mechanical cleaning

Teaching Plan

Sub – 3ME02 MANUFACTURING PROCESSES

Lecture No.	Topic
Unit 1	
1	Introduction to manufacturing processes & classification
2	Introduction to pattern making, Pattern materials
3	pattern making tools, allowances, Types of patterns,
4	functions of patterns, General properties of moulding sands, Mold hardness.
5	Preparation of sand moulds of different types, Moulding processes
6	core making, core prints, core boxes
7	Sand casting Processes
8	Basic principle and Terminology of sand casting
9	design of gating and riser system – by numerical approach.

Lecture No.	Topic
Unit 2	
1	Technology of melting and casting - Melting furnaces, crucibles
2	pit, open hearth, gas fired cupola
3	cupola operation and electric hearth furnaces
4	Electric furnaces - Direct Arc, Indirect arc and electric induction furnace
5	Defects in castings and its types, Causes and remedies of casting defects
6	Origin and classification of defects, shaping faults, inclusion and sand defects, Gas defects, shrinkage defects, contraction defects, dimensional errors
7	Inspection and testing of castings:- Radiography, ultrasonic, Eddy current testing, fluorescent penetrant test

Lecture No.	Topic
Unit 3	
1	Casting processes and their principle of operation and applications
2	permanent mold casting
3	slush casting, shell molding
4	Investment or lost wax casting, vacuum process,
5	centrifugal casting, continuous casting
6	Die casting equipment and processes for Gravity
7	pressure and vacuum casting methods, cleaning of castings
8	Modernisation & Mechanisation of Foundries

Execution Plan

Name of Faculty:-_____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
25.	28-Sep	Freudenstein's equn - Derivation.		
26.	29-Sep	Numericaly of Pt.		
27.	30-sep	chebychev's equn & it's Numerical.		
		Unit - IV.		
28.	19-Oct	Friction - Introduction to concept of friction.		
29.	20-Oct	Frictional Torque in pivot & collar bearing.		
80.	21-Oct	Numericaly on bearings		
31.	23-Oct	Introduction to friction clutches & their type		
32.	26-Oct	Numericaly on friction clutches single & multi		
33.	27-Oct	Introduction to brakes & its types		
34.	28-Oct	Numericaly of brakes.		
35.	2-Nov	Dynamometer & its Different types.		
		Unit - I.		
36.	3-Nov	Introduction to special purpose Mechanism.		Online Classes
37.	4-Nov	Steering gear mechanism - Davis & Ackerman.		
38.	6-Nov	Geneva wheel Mechanism & stralght line ex		
39.	23-Nov	Cams - Introduction to cam & follower.		
40.	24-Nov	Different types of cam & followers.		
41.	25-Nov	Cam Terminology - all terms included.		
42.	27-Nov	Different motion of followers.		
43.	1-Dec	Numericaly on cam Profile.		
44.	2-Dec	Numericaly contd..		
45	4-Dec	Numerical contd.		
		unit-6		
46.	7-Dec	Introduction to gears. & their type.		
47.	8-Dec	Gear Terminology - all terms included.		
48.	9-Dec	Numericaly on Gears.		
49.	1-Jan	Introduction to Gear train		
50.	2-Jan	Different types of gear train.		
51.	4-Jan	Numericaly on gear train.		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S. M. Patopate   Semester V th   Section: A/B/C   B

Subject Code: 5SM5   Subject Name: Theory of Machine- I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1.	11-Aug	unit-I - Introduction to TOM-I, Basic of Link pair, machine.		
2.	12-Aug	Different types of Links, kinematic pair, types of Joints & their relations.		
3.	14-Aug	Classification of kinematic pair, kinematic chain & inversion Grashofu law		
4.	17-Aug	Inversion of quadric cycle chain, four bar mechanism.		
5.	18-Aug	Inversion of single slider crank chain.		
6.	19-Aug	Inversion of double slider crank chain.		
7.	21-Aug	Grubler's criterion & kutzbach theory.		
		unit-II.		
8.	24-Aug	velocity analysis - Introduction, Methods of it.		
9.	25-Aug	Relative velocity analysis.		
10.	28-Aug	Numerical on Relative velocity analysis.		
11.	2 - Sep	Instanteneous center of Rotation, location of it		
12.	4-Sep	kennedy's theorem & Numerical of it.		
13.	7-Sep	Problems on ICR Method.& concept of T.R.		
14.	8-Sep	Acceleration Analysis - Relative & pole Method		
15.	9-Sep	Numerical on Acceleration analysis.		
16.	11-Sep	corialis component acceleration & problem on it.		
17.	14-Sep	klein's construction for single slider,		
18.	15-Sep	Analytical Method for single slider.		
		unit-III		
19.	16 - Sep	Synthesis of Mechanism: Introduction of it.		
20.	18-Sep	Types of synthesis, Number, Diamensional		
21.	21- Sep	Graphical synthesis -Two & Three position		
22.	22-Sep	Graphical synthesis -four position		
23.	23-Sep	Graphical synthesis - single slider		
24.	25-Sep	overlay synthesis - four bar position.		

(note in HOD column, written vertically: online classes)

38.		b) Cams:-Introduction, types of cam and follower, pressure angle	
39.		Different motions of followers	
40.		Graphical layout of cam profiles	
41.		Graphical layouts contd.	
42.		Cams with specified contours	
43.	VI	**Gears:** Introduction, terminology, gear tooth profiles	
44.		Involumetry, spur and helical gears	
45.		Spiral gears and its efficiency	
46.		Bevel and worm gears	
47.		**Gear Trains:** types of gear trains	
48.		Speed ratio applications	
49.		Problems on gear trains	

Teaching Plan
5SM5 Theory of Machines-I
V Semester Mechanical Engineering 2012-13

LN	Unit	Topic	Remarks
1.	I	1. Introduction, definitions of link, pair, machine, mechanism	
2.		Different types of links, kinematic pairs; introduction to ball screws and linear bearings.	
3.		Classification of kinematic pairs, kinematic chain and inversion, Grashof's law and class-I and class-II mechanisms	
4.		Inversions of quadric cycle chain, Inversions of single slider-crank chain	
5.		Inversions of double slider crank chain	
6.		Grubler's criterion and Kutzbach theory	
7.		**2 Kinematic analysis of mechanism**: Transmission angle and its significance, Mechanical Advantage, Coupler curves and its properties and applications, Radius of curvature of coupler curves.	
8.	II	**1. Velocity Analysis**: Introduction, Methods of velocity analysis, Graphical and analytical	
9.		Relative velocity method	
10.		Problems on relative velocity method	
11.		Instantaneous centre of rotation, Kennedy's theorem location of ICRs	
12.		Problems on ICR method	
13.		Concept of equivalent mechanism and problems on it, Transmission ratio	
14.		**2. Acceleration analysis**: Relative acceleration method and pole method	
15.		Problem on acceleration analysis	
16.		Coriolis' component acceleration and problems on it	
17.		Klein's construction for slider crank and four bar mechanism	
18.		Analytical method for slider crank mechanism	
19.	III	**Synthesis of Mechanism**: Introduction, type, number & dimensions synthesis	
20.		Graphical methods of two position and three position synthesis	
21.		Graphical method of four position synthesis, synthesis for input-output co-ordination	
22.		Overlay method,	
23.		Freudenstien's equations	
24.		Synthesis for specified angular velocities and acceleration	
25.	IV	**Friction a)** Friction angle and friction circle and friction axis	
26.		b) Frictional torque in pivot and collar bearing	
27.		Problems on bearings	
28.		c) Brakes-types, construction, operation and calculations	
29.		Problems on brakes	
30.		Clutches-types, construction, operation and calculations	
31.		Problems on clutches	
32.		Dynamometer-types, construction, operation and calculations	
33.		Dynamometers contd.	
34.	V	**Special purpose mechanism**: a) Straight line mechanisms	
35.		Steering mechanism	
36.		Double dwell, intermittent rotary motion mechanism	
37.		Quick return, toggle mechanism.	

Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- _____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
24.	18-Mar	Root locy - Introduction & concept.		
25.	19-Mar	Procedure to draw the Root locy.		
26.	22-Mar	System with transportation lag.		
27.	23-Mar	Numerical on Root locy		
28.	25-Mar	Numerical on ―||―		
29.	26-Mar	―||― .		
		unit-V.		
30.	6-Apr	Frequency Response analysis		
31.	8-Apr	Concept & Drawing of FRA.		
32.	9-Apr	Construction & Numerical on FRA.		
33.	12-Apr	Numerical on FRA		
34.	15-Apr	―||―		
35.	16-Apr	Numerical on FRA		
36.	29-Apr	Numerical on FRA		
37.	30-Apr	Numerical on FRA		
88.	3-May	Numerical on FRA.		
		unit-II		
39.	4-May	Basic Control action & Controllers.		
40.	6-May	classification of Industrial controller		
41.	7-May	classification of Proportional controller		
42.	10-May	obtaining integral control action		
43.	11-May	effects of integral & derivative controller		
		unit-VI		
44.	13-May	Speed control system, Prime mover		
45.	8-Jun	system generators		
46.	9-Jun	Automated speed control system		
47.	11-Jun	Important system generators.		
48.	12-Jun	servomotors .		

online Classes

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)
Execution Plan

Name of Faculty:- S.M. Pasopate Semester VI Section: A/B/C

B

Subject Code: 6ME03 Subject Name: Control System Engg.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
		unit -I.		
1.	18-jan	Introduction to control system Engg.		
2.	19-jan	what is meant by system, control system.		
3.	21-jan	Different types of system: open & close		
4.	22-jan	Transfer function & physical system.		
5.	1-Feb	Introduction to BDR method & its Rulg.		
6.	2-Feb	Numericay on BDR		
7.	4-Feb	Numerical on BDR.		
8.	5-Feb	Introduction to signal flow graph & its Rule		
9.	8-Feb	Numericay on SFG.		
10.	9-Feb	Numericay on SFG.		
		unit-III,		
11.	11-Feb	Introduction to Transient Response Analysis.		
12.	12-Feb	Different types of Test signal		
13.	15-Feb	step Eamp, impuye input, steady state Repoye		
14.	22-Feb	steady state Response for 1st, 2nd o&d er system		
15	23-Feb	Numericay on time Response anlaysis		
16.	25-Feb	Numerical on time Respose analysts.		
17.	26-Feb	Numerlcay on steady state error.		
18.	1-Mar	Numerical on Risk error, peak error.		
19.	2-Mar	Numericay on ——||—— rise time		
		unit-IV.		
20.	5-Mar	Introduction to stability of system		
21.	8-Mar	Hurwitz criterion, & its Numerical.		
22	9-Mar	Routy criteria & its Numerlcal.		
23.	16-Mar	Numerical on Routh's criterion.		

online classes

41.		Numerical of Bode plot	
42.		Numerical of Bode plot	
43.	**VI**	Introduction to speed control systems, prime movers, system generators	
44.		Study of Important automatic speed control systems in machine tools	
45.		Study of important prime movers in the control systems	
46.		Study of important system generators	
47.		Study of analysis of performance characteristics	
48.		Introduction to Servomotors	

Teaching Plan
6ME03 Control System Engineering
VI Semester Mechanical Engineering 2020 -21

LN	Unit	Topic	Remarks
1.	I	Introduction to System concept, open loop & close loop system	
2.		Mathematical models of physical systems, transfer functions	
3.		Introduction to Block diagrams reduction method	
4.		Numerical on Block diagrams reduction method	
5.		Numerical on Block diagrams reduction method	
6.		Introduction to signal flow graph	
7.		Numerical on Signal flow graph	
8.	II	Introduction to Basic control actions and Industrial controllers	
9.		Classification of Industrial automatic controllers, explanation of it	
10.		Control actions and Classification of proportional controllers	
11.		Obtaining derivative and integral control actions	
12.		Effects of integral and derivative control action on systems performance.	
13.	III	Introduction to Transient response analysis	
14.		Introduction to standard test signals	
15.		Steady state response of the first order systems for the stop ramp & the impulse input	
16.		Steady state response of the Second order systems for the stop ramp & the impulse input	
17.		Introduction to transient response specifications	
18.		Identification of steady state error& error constants	
19.		Numerical related to time response analysis, steady state error, risk erroer, peak time, rise time etc	
20.		Numerical related to time response analysis, steady state error, risk erroer, peak time, rise time etc	
21.		Numerical related to time response analysis, steady state error, risk erroer, peak time, rise time etc	
22.		Numerical related to time response analysis, steady state error, risk erroer, peak time, rise time etc	
23.	IV	Introduction to concept of stability of the system	
24.		Necessary conditions for the stability	
25.		Introduction to Hurwitz Criteria, advantages, disadvantages& numerical of it	
26.		Introduction to Routh's criterion, Advantages, Disadvantages of it	
27.		Numerical on Routh's criterion, Range of K	
28.		Introduction to root locus concept	
29.		Procedure of construction of root locus systems	
30.		System with the transportation lag	
31.		Numerical of Root locus	
32.		Numerical of Root locus	
33.		Numerical of Root locus	
34.	V	Introduction to Frequency Response analysis	
35.		Introduction to concept of bode plot diagrams	
36.		Procedure of construction of bode plot	
37.		Numerical of Bode plot	
38.		Numerical of Bode plot	
39.		Numerical of Bode plot	
40.		Numerical of Bode plot	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.J.Deshmukh   Semester____   Section: A/B/C   A+B

Subject Code: 8ME02   Subject Name: Refrigeration & A/c

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	16/04/21	Psychrometric chart. understanding		Online
30	17/04/21	Representation of. psy. process in chart		-"-
31	20/04/21	Mixing of two streams of air.		-"-
32	23/04/21	Air-washers.		-"-
33	24/04/21	Human Comforot conditions.		-"-
34	26/04/21	Numericals		-"-
35	30/04/21	Numericals.		-"-
36	03/05/21	Intro to air-conditioning system		-"-
37	04/05/21	Window and split A/c system.		-"-
38	07/05/21	Central systems, direct expn system		HOD
39	08/05/21	All air & All water systems.		-"-
40	10/05/21	Year sound A/c systems.		-"-
41	11/05/21	Ducting - Types		-"-
42	15/05/21	Air ducting systems.		-"-
43	17/05/21	Introduction to load calculation		-"-
44	18/05/21	Heat gain - sensible and latent		-"-
45	21/05/21	Cooling load calculation.		-"-
46	22/05/21	RSHF, GSHF etc calculation.		-"-
47	24/05/21	ESHF calculation.		-"-
48	25/05/21	Numericals		-"-
49	28/05/21	Numericals.		-"-
50	29/05/21	MCQ		-"-
51	31/05/21	MCQ		-"-
52	4/06/21	MCQ		-"-
53	05/06/21	MCQ.		-"-
54	11/06/21	Doubt solving session.		-"-

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.J.Deshmukh Semester VIII.   Section: A/B/C   A+B

Subject Code: 8ME02   Subject Name: Refrigeration & A/c

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19/01/21	Introduction to Ref. & VCRS		Online class
2.	22/01/21	Analysis of VCR system		-u-
3.	23/01/21	Effect of operating condition		-u-
4.	25/01/21	Numericals of simple VCR.		-u-
5.	29/01/21	Numericals on VCR system.		-u-
6.	30/01/21	Actual VCR systems.		-u-
7.	1/02/21	Refrigerents. classification		-u-
8.	05/02/21	Proopesties of commanly used Ref.		-u-
9.	06/02/21	Introoduction to multistage system		-u-
10.	08/02/21	Multistage / compound comp.		-u-
11.	9/02/21	Flash gas semoval and flash intercooling		-u-
12.	12/02/21	Complete compound comp. system		-u-
13.	13/02/21	Multi evaporator system.		-u-
14.	15/02/21	Multi exp. system with ind exp.valve		-u-
15.	16/02/21	Multi exp. system with multiple exp.valve		-u-
16.	20/02/21	Cas-cade system.		-u-
17.	22/02/21	Numericals on compound comp.		-u-
18.	23/02/21	Numericals on multi exp. system		-u-
19.	26/02/21	Numericals.		-u-
20.	1/03/21	Introo. to ref. components and controls		-u-
21.	2/03/21	study and analysis of comp.		-u-
22.	05/03/21	condensers and exaporators.		-u-
23.	06/03/21	Classification of expn valves.		-u-
24.	8/03/21	selection criteria- for components		-u-
25.	9/03/21	study of various controls.		-u-
26.	12/03/21	Defrosting systems.		-u-
27.	18/03/21	charging of refrigeration.		-u-
28.	12/04/21	Psychometric proopeties of moist air		-u-

Scanned by CamScanner

40		Types of supply air ducts	
41		Consideration for selection & location of outlet.	
42		Distribution partners of outlet, location	
43		Introduction to Load calculation & applied Psychrosnety	
44		basic consideration at heat gains/losses sensible & latent , heat due to occupancy lightening, appliances, products	
45		air conditioning systems	
46	VI	safety factor cooling load estimates, heating load estimates	
47		Sensible heat factor by pass factor	
48		apparatus dew point, effective sensible heat factor	
49		Numerical	
50		Numerical	

Teaching Plan

Subject: Refrigeration & Air-Conditioning   Semester: VIII   Subject Code: 8ME02

Lecture No.	Unit	Topic covered	Remark
1	I	Basics of Refrigeration & Introduction to Vapour compression system.	
2		Analysis of simple vapour compression system, Use of P-h & T-S charts	
3		Effect of operating conditions such as evaporation and condensation pressure	
4		Effect of superheating and sub cooling.	
5		Actual vapour compression system.	
6		Refrigerants :- classification: primary & secondary refrigerants, desirable properties of refrigerants	
7		merits & demerits of commonly used refrigerants such as Ammonia R-12, R-22 and their selections	
8		eco friendly refrigeration 134 a, HFC	
9	II	Introduction to Multi stage pressure systems.	
10		Multistage compression: choice of intermediate pressure	
11		Complete multi-stage compressions.	
12		Multi evaporator systems	
13		single compression individual expansion value, single compression multi expansion valve	
14		Individual compressor multi expansion valves.	
15		cascade systems, its applications to cryogenics	
16		Air liquefaction processes- Linde- Hampson	
17		Numerical	
18		Numerical	
19	III	Introduction to Refrigeration systems components & controls.	
20		Brief study of refrigerants compressor	
21		Condensers, evaporators	
22		Expansion valves, drier, fillers	
23		Selection criteria for the components of vapours compression systems	
24		Flow controls, temperature controls, pressure controls and safety devices	
25		Defrosting systems	
26		Testing & charging of refrigeration systems, leak detection	
27	IV	Psychromeric properties of moist air.	
28		Psychrometric chart, concept of thermodynamic wet –bulb temperature	
29		Representations of Psychromeric process on Psychromeric charts, mixing of air	
30		Evaporating cooling, air washers	
31		Human comfort:- metabolism of human body, factors influencing comfort	
32		Concept of effective temperature, optimum effective temperature & comfort charts	
33		Numerical	
34	V	Introduction to air conditioning systems.	
35		Unitary system, package, window type & split type air conditioning.	
36		Central system components, types.	
37		Direct expansion system, all water system & all air system	
38		Summers & year round air conditioning	
39		Transmission & distribution.	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S. J. Deshmukh   Semester III   Section: A/B/C   **B**

Subject Code: 3ME04   Subject Name: Engg. Thermodynamics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	19/10/20	Limitation to first law		Online
28	20/10/20	Heat engine, Ref and Heat pump		-u-
29	21/10/20	Statements of second law		-u-
30	26/10/20	Carnot cycle.		-u-
31	27/10/20	Proopositions of carnot cycle.		-u-
32	28/10/20	Thermodynamic temp. scale.		-u-
33	02/11/20	Reversed carnot cycle.		-u-
34	3/11/20	Inequality of Clausius (Numericals)		-u-
35	4/11/20	Numericals.		-u-
36	9/11/20	Properties of steam.		-u-
37	10/11/20	——— -u- ———		-u-
38	16/11/20	Internal energy and Ext. work		-u-
39	17/11/20	Steam table and its use		-u-
40	18/11/20	W.D. and H.T. in various process.		-u-
41	24/11/20	Determination of Dryness froaction		-u-
42	25/11/20	Numericals.		-u-
43	1/02/20	Air standard cycles.		-u-
44	2/12/20	Derivation of efficiency of m.e.p.		-u-
45	7/12/20	——— -u- ——— .		-u-
46	8/12/20	Comparisons of cycles.		-u-
47	9/12/20	Vapour power cycles.		-u-
48	14/15/20	Comparison of cycles.		-u-
49	15/12/20	Numericals.		-u-
50	Extra	M.C.Q.		
51	Extra	M.C.Q.		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.J.Deshmukh Semester III Section: A/B/C B

Subject Code: 3ME04 Subject Name: Engg. thermodynamics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11/08/20	Introduction. to T.E.		Online class
2	12/08/20	System, Property, Process, cycle		-11-
3	17/08/20	Units of diff. Physical Parmeter		-11-
4	18/08/20	Open, close, Iso, system, Proopertiess		-11-
5	19/08/20	Understanding Gas, Laws.		-11-
6	24	Ideal Gas equation		-11-
7	25	Different thermodynamic Process		-11-
8	31	Numericals on Ideal Gas		-11-
9	02/09/20	Work - Themo. Work & disp.Work		-11-
10	5	Other forms of work and heat		-11-
11	7	Work done during verious proces		-11-
12	8	Numericals.		-11-
13	9	Classification of energy		-11-
14	14	First Law of thermo. (Closed system)		-11-
15	15	energy a property of system.		-11-
16	16	Enthalpy and specific heats.		-11-
17	21	Heat transfer during veriousproces		-11-
18	22	Numericals		-11-
19	23	Numericals.		-11-
20	26	steady state steady flow prow		-11-
21	28	Mass balance and Enrgy Blance		-11-
22	29	GSFEE Derivation		-11-
23	30	SFEE for verious open systems		-11-
24	05/10/20	——— ч ———.		-11-
25	6/10/20	Comparison between sf and Nf work		-11-
26	7/10/20	Numericals.		-11-

Head
Deptt. of Mechanical Engineering
PRMIT & R, Badnera

33		Numerical on Second law of thermodynamic	
34		Introduction to Entropy, Availability and irreversibility. Principle of increase of Entropy	
35		Triple point, critical point, Sensible heat, latent heat, superheat and total heat of steam	
36		Wet steam, dryness fraction, Internal energy of steam, External work of evaporation	
37		Specific volume, enthalpy, internal energy and entropy of steam	
38	V	T-S diagram, Mollier chart, Steam tables and their use	
39		Work done and heat transfer during various thermodynamics processes with steam as working fluid	
40		Throttling of steam and determination of dryness fraction using various calorimeters.	
41		Numerical on dryness fraction	
42		Numerical on dryness fraction	
43		Basic concepts of Air Standard Cycle and its assumption	
44		Ottto and diesel cycle with their efficiencies and mean effective pressure.	
45		Comparison of Ottto and diesel cycle and Numerical	
46	VI	Semidiesel, sterling and joule cycles with their efficiencies and mean effective pressure	
47		Rankine and Modified Rankine Cycle.	
48		Comparison of Rankine and Carnot cycle, representation on P-V, T-S and H-S diagram.	
49		Numerical on Air Standard Cycles	
50		Numerical on Vapour Cycles	

TEACHING PLAN

Subject: Engineering Thermodynamics   Semester: III   Subject Code: 3ME04

Lecture No.	Unit	Topic Covered	Remark
1		Introduction to basic concepts of thermodynamics ,Macroscopic and microscopic approaches	
2		Thermodynamic system, classes of system, Properties of system, state, path, processes and cycle	
3		Thermodynamic equilibrium, Temperatures, Zeroth law of thermodynamics and Quasi-static process	
4		Gas Laws and Ideal gas equation of states, Characteristic gas constant, universal gas constant and Characteristic gas equation	
5	I	Numerical on Zeroth law	
6		Definition of work, thermodynamic work, displacement work and other forms of work	
7		Definition of Heat, Work and heat transfer as path function, comparison of work and heat	
8		Work done during various processes	
9		Work done during various processes, P-V diagrams	
10		Numerical on work done during various processes	
11		Energy, classification of energy, law of conservation of energy applied to closed system under going a cycle	
12		Work done in closed system (pdv work), Joules experiment	
13		Energy a property of system, internal energy- a function of temperature, Enthalpy, Derivation $PV^\gamma = C$	
14	II	specific heat at constant volume and constant pressure, Change in internal energy	
15		Heat transfer during various processes	
16		Heat transfer during various processes	
17		Numerical on First law of thermodynamic	
18		Introduction to flow processes, Mass balance and energy balance in steady flow process	
19		Work done during steady flow process	
20		SFEE applied to nozzles, diffusers, turbine and compressor	
21		Numericals on SFEE applied to nozzles, diffusers turbine and compressor	
22	III	SFEE applied to pumps, boiler and condenser	
23		Numericals on SFEE applied to pumps, boiler and condenser	
24		SFEE applied to heat exchangers and Throttle devices	
25		Numericals on SFEE applied to heat exchangers and Throttle devices	
26		Work done during variable flow processes	
27		Limitations of Ist law, Thermal energy reservoir, heat engines refrigerator and heat pumps	
28		Kelvin-Plank and Clausious statements and their equivalence	
29	IV	reversible and irreversible processes and Carnot cycle	
30		Propositions regarding the efficiency of Carnot cycles, The thermodynamic temperature scale and Reverse carnot cycle	
31		COP of heat pump and refrigeration, Inequality of Clausius.	
32		Numerical on Second law of thermodynamic	

Execution Plan

Name of Faculty:-_____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	12/3/21	Assignment problems - Intro & Hungarian method	&b	
28	13/3/21	Assignment problems - Minimization Prob	&b	
29	13/3/21	Assignment Problems - Max. prob.	&b	
30	15/4/21	Network models, analysis, introduction	B	
31	16/4/21	Drawing of project networks, Falkersons rule	B	
32	17/4/21	PERT analysis & problems	&b	
33	21/4/21	PERT Problems	&b	
34	22/4/21	CPM analysis & problems	&b	
35	23/4/21	CPM problems	&b	
36	24/4/21	CPM cost analysis problems	&b	
37	28/4/21	Crashing of networks	&b	
38	29/4/21	Updating the networks, Resource smoothing & leveling	&b	
39	30/4/21	Waiting Line problems - theory & intro.	&b	
40	5/5/21	Classification, M/M/1 & M/M/s models	&b	
41	6/5/21	Problems on waiting line models	&b	
42	7/5/21	Sequencing problems - intro, terminology	&b	
43	8/5/21	Processing n jobs thro' 2 & 3 machines	&b	
44	19/5/21	Processing n jobs thro' m machines	&b	
45	20/5/21	Processing 2 jobs thro' m machines	&b	
46	21/5/21	Replacement models - Individual & Group	&b	
47	22/5/21	Problems on individual replacement	&b	
48	27/5/21	Problems on group replacement	&b	
49	28/5/21	Simulation - intro., adv. & disadvs.	&b	
50	29/5/21	Monte Carlo simulation & problems	B	
51	3/6/21	Applications of simulation to waiting line & inventory models	&b	
52	9/6/21	Application of simulation to maintenance models	B	
53	10/6/21	Dynamic programming - Intro, Characteristics	&b	
54	11/6/21	DP applied in network problems	&b	
55	12/6/21	Cargo Loading & travelling salesman problems using DP.	&b	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.G. Bahaley _____ Semester 8 th   Section: A/B/C

Subject Code: 8ME04   Subject Name: Operations Research Techniques

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	20/1/21	Introduction, history & charateristics of OR	ß	
2	21/1/21	Phases of OR, Models in OR	ß	
3	22/1/21	Models in OR, Application of OR	ß	
4	23/1/21	Advantages & Limitation of OR, Formulation	ß	
5	27/1/21	Formulation problems in LP	ß	
6	28/1/21	Graphical method of LPP	ß	
7	29/1/21	Problems on graphical method	ß	
8	30/1/21	Problems on graphical method	ß	
9	3/2/21	Problems on graphical method	ß	
10	4/2/21	Simplex method - introduction & steps	ß	
11	5/2/21	Numericls on simplex method ≤ type	ß	
12	6/2/21	Simplex method - Maximization prob.	ß	
13	12/2/21	Simplex method problems	ß	
14	13/2/21	Simplex method - alternate opt. soln.	ß	
15	17/2/21	Big M Simplex method, Artificial var.	ß	
16	18/2/21	Computation problems in Simplex method	ß	
17	20/2/21	Unbounded & Infeasible solutions in LPP	ß	
18	24/2/21	Primal-Dual relationship is LPP	ß	
19	25/2/21	Transportation problems - Intro.	ß	
20	26/2/21	Trasportation prob. Initial Soln	ß	
21	27/2/21	N-W Corner Rule, Least Cost Rule methods	ß	
22	3/3/21	VAM method	ß	
23	4/3/21	MODI method for optimization	ß	
24	5/3/21	Problems on MODS method	ß	
25	6/3/21	Degeneracy in Transportation Problems	ß	
26	10/3/21	Degeneracy at different levels	ß	

24.		Problems on above	
25.		**Sequencing**- Introduction, notations, terminology, Processing n jobs through 2 machines	
26.		Processing n jobs through m machines	
27.		Processing 2 jobs through m machines	
28.	V	**Replacement models**- introduction, Value of money criterion, individual and group replacement policies	
29.		Problems on individual replacement	
30.		Problems on group replacement	
31.		**Simulation**- introduction, advantages & limitations,	
32.		Monte Carlo technique	
33.		Application of simulation to waiting line model, inventory models	
34.		Application of simulation to maintenance models, etc.	
35.	VI	**Dynamic programming**- introduction, characteristics	
36.		Development of an optimum decision policy	
37.		Problems capital budgeting	
38.		Problems on production scheduling, travelling salesman	
39.		Problems on marketing, inventory	
40.		Cargo Loading problem	

VIII Semester Mechanical Engineering
Operations Research Techniques (8ME04)
Teaching Plan 2020-21

L.N	Unit	Topic	Remarks
1.	I	Introduction, History, Definition, Characteristic , Phases of OR, Applications. Limitations of OR,	
2.		Models and classification of models in OR	
3.		**Linear Programming** (LP)- Introduction, Standard .orm of LPP, Formulation,	
4.		Graphical method and problems	
5.		Simplex method and problems	
6.		Simplex method problems	
7.		Simplex method problems	
8.		Primal dual relationship	
9.	II	**Transportation problems**- Introduction, LP Formulation of Transportation problems	
10.		Methods of finding initial solution	
11.		MODI method	
12.		**Assignment problems**- Introduction, Mathematical statement	
13.		Solution methods of assignment problems	
14.		Variations of assignment problems	
15.	III	**Network models**- Introduction, network construction	
16.		Problems of network construction, Time estimates in network models	
17.		PERT analysis	
18.		CPM analysis	
19.		Cost analysis & crashing the network	
20.		Updating- Resource smoothing & Resource leveling	
21.	IV	**Waiting line models**- Introduction, characteristics, applications,	
22.		Classification of Waiting line models	
23.		M/M/1 and M/M/s models and characteristics	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.B.Thakre   Semester 7th   Section: A/B/C

Subject Code: 7ME02   Subject Name: TC-II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	04/11/20	Performance charateristics	h	—)1—
30	5/11/20	Applications q G.T	h	—)1—
31	6/11/20	Ram jet Jet Propulsion etc	h	—)1—
32	7/11/20	Intro to NCES	h	—)1—
33	20/11/20	Types q collector	h	—)1—
34	21/11/20	Wind Energy	h	—)1—
35	25/11/20	Biomass Energy	h	—)1—
36	26/11/20	Biogas & Types q Biogasplants	h	—)1—
37	27/11/20	Pyrolysis & Bio deisel	h	—)1—
38	28/11/20	Nuclear power plants	h	—)1—
39	31/11/20	Conversion & breeding infission	h	—)1—
40	2/12/20	Working q CANDU Reactor	h	—)1—
41	3/12/20	Various components q Reactor	h	—)1—
42	4/12/20	BWR	h	—)1—
43	9/12/20	PWR	h	—)1—
44	10/12/20	Gas Cooled Reactor	h	—)1—
45	12/12/20	liquid metal cooled Reactor	h	—)1—

BSU

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Dr. S.B. Thakre   Semester 7th   Section: A/B/C ✓

Subject Code: 7 ME02   Subject Name: EC-II (even) odd

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19/8/20	Reciprocating Air Compressor.		online
2	20/8/20	Methods & eff. of Compression		—11—
3	21/8/20	Reducing losses in single & Multistage comp.		—11—
4	27/8/20	C.V & its effects		—11—
5	28/8/20	Condition for minimum Work		—11—
6	29/8/20	Introcooling, IHP, BHP		—11—
7	02/9/20	Numericals.		—11—
8	03/9/20	Numericals		—11—
9	4/9/20	Rotary Compressors		
10	5/9/20	Comparison & general Eq		
11	9/9/20	Vane & Roots blower		—11—
12	10/9/20	Velocity diagrams		—11—
13	11/9/20	Numericals		—11—
14	12/9/20	Numericals		—11—
15	16/9/20	Numericals.		—11—
16	18/9/20	Classification of Ref. Systems		—11—
17	19/9/20	VCR & T-S & P-h diagrams		—11—
18	23/9/20	Numericals		—11—
19	24/9/20	Vapour Absorption system		—11—
20	25/9/20	Air Ref & various cycles		—11—
21	26/9/20	Numerical.		—11—
22	30/9/20	Air Conditioning		—11—
23	07/10/20	Numericals		—11—
24	8/10/20	classification of G.T		—11—
25	9/10/20	Methods of increasing the eff.		—11—
26	10/10/20	Numericals		—11—
27	23/10/20	Numericals		—11—
28	24/10/20	Numericals		—11—

21.		Air conditioning:- Definitions, classification and applications. Psychrometric properties, psychrometric charts elementary treatment with simple problems.
22.		Numericals
23.		Classification of gas turbines, construction and workng Gas turbine ideal and actual cycles constant volume, constant pressure, (Open and closed) cycle analysis.
24.		Regeneration & Numericals on it.
25.		Inter cooling & Numerical on it,
26.	IV	reheating application & Numerical on it.
27.		Optimum and maximum presure ratios, work ratios. Performance characteristics.
28.		Numericals on topic covered.
29.		Numerical on Combination of regeneration ,Inter cooling &reheating.
30.		Fields of application of gas turbine power plant. Introduction to jet propulsion, Ram jet, turbo jet
31.		Introduction :- Renewable & Nonrenewable sources. Solar Radiation :- Solar constant, basic earth-sun angles. Spectral distribution of extra terrestrial radiations & its variation.
32.		Different types of collectors
33.		Wind Power:- Wind speed data, power in the wind, wind power development, types of wind mills, application for pumping and power generation.
34.	V	generation. Biomass Energy Resources : Mechanism of green plant photosynthesis. efficienev of conversion, solar energy plantation,
35.		biogas – Types of biogas plants, factors affecting production rates. Pyrolysis, Gasifiess :
36.		Different types of Biogas plants
37.		Numericals on related topics
38.		NUCLEAR POWER : Fusion, fission,Chain reaction, Different nuclear fuels.
39.		conversion and breeding in nuclear fission,
40.		Classification and working of different reactors CANDU reactor.
41.		components of reactor, coolants, moderators etc.
42.		Different type of reactors such as boiling water,
43.		pressurized water Reactor
44.	VI	gas cooled Reactor
45.		liquidised metal cooled thermal reactors.

Lecture no.	Unit No.	Topic covered(Description)
		Teaching Plan -Energy Conversion-II

Lecture no.	Unit No.	Topic covered(Description)
1.		. Reciprocating Air Compressors:- Industrial uses of compressed air, Construction and working.
2.		Methods of compression and efficiencies of compression,
3.		Methods of reducing losses during compression single and multistaging of compressors,
4.	I	clearance volume and its effect on work done and volumetric efficiency,
5.		condition for minimum work in two stage compression,
6.		Intercooling and its effects. Overall, isothermal and adiabatie efficiencies,
7.		IHP,BHP, requirements and after cooler
8.		Numericals
9.		Rotary compressors:- Comparison between reciprocating and rotary compressors, difference between fans, blowers and compressors,
10.		General equations for rotary machines.
11.		Vane, Roots blower, construction, working and
12.		velocity diagrams of centrifugal and axial flow compressors.
13.	II	Performance characteristics of blowers and compressors
14.		Numericals
15.		Numericals
16.		Definitions, classifications of refrigeration system; vapour compression refrigeration,
17.		Analysis of simple saturated vapor compression cycle, representation on T-s, Ph diagrams, Numericals
18.	III	vapour absorption refrigeration based on solar and waste heat recovery.
19.		Air refrigeration, Bell-colman cycle, reversed carnnot cycle, reversed Brayton cycle. Need for CFC free refrigerants.
20.		Numericals

Scanned by CamScanner

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- S.B.Thakre   Semester 4th   Section: A/B/C

Subject Code: 4ME03   Subject Name: EC-I.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	10/3/21	Governing of steam turbines	h	online
30	15/3/21	& Numericals.	h	-)-
31	16/3/21	Nuclear power plants	h	-)-
32	17/3/21	Conversion & breeding of nuclear fission	h	-"-
33	18/3/21	Classification & Working of diff reactors	h	-"-
34	22/3/21	Boiling water reactor	h	-"-
35	23/3/21	. PWR	h	-"-
36	24/3/21	Candu & gas cooled reactor.	h	-"-
37	25/3/21	Intro to NCES	h	-"-
38	30/3/21	Basic sun angles. solar constant	h	-"-
39	01/4/21	Different types of collectors	h	-"-
40	5/4/21	Wind Energy systems.	h	-"-
41	7/4/21	Biomass Energy	h	-"-
42	12/4/21	solar energy plantation	h	-"-
43	15/4/21	Types of biogas plant	h	-"-
44	16/4/21	Production Rate & Pyrolysis.	h	-"-
45	17/4/21	Types of Biogas plants	h	-"-

Execution Plan

Name of Faculty:- Dr. S.B. Thakare Semester 4th Section: A/B/C

Subject Code: _____ Subject Name: EC-I (odd Sem) Even

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18/1/21	Steam power plant in detail	h	online
2	19/1/21	Intro. to water tube boilar	h	"
3	20/1/21	—"— Fire Tube Boiler	h	"
4	21/1/21	Study of H.P. Boilers.	h	"
5	25/1/21	Boiler mountings & accessories.	h	"
6	27/1/21	F.B.C & cogeneration.	h	"
7	01/2/21	Boiler draught	h	"
8	2/2/21	Exp^n for taght of chimney	h	"
9	3/2/21	Eff. of chimney & draught Loss	h	"
10	4/2/21	Equivalent evaporation	h	"
11	8/2/21	Problems	h	"
12	9/2/21	Problems & Heat balance sheet	h	"
13	10/2/21	Need of Condenser	h	"
14	11/2/21	Daltoni Law of partial pressure	h	"
15	15/2/21	Sources of air leakage in Condensir	h	"
16	16/2/21	Various pumps used in Condenser	h	"
17	17/2/21	Cooling pond, Cooling towers.	h	"
18	18/2/21	steam nozzels & Exp^n for C.Press ratio	h	"
19	22/2/21	Effect of friction	h	"
20	23/2/21	Nozzel eff & Numericals.	h	"
21	24/2/21	Super saturated flow & Wilson line	h	"
22	25/2/21	steam Turbines & Compounding.	h	"
23	01/3/21	Methods of Improving the eff. of S.T	h	"
24	2/3/21	Velocity diagrams	h	"
25	3/3/21	Numericals.	h	"
26	4/3/21	Numrication	h	"
27	8/3/21	Numericals.	h	"
28	9/3/21	Loss in S.T (various)	h	"

27.			LOSSES IN STEAM TURBINES:- Nozzle losses:- blade friction, partial admission, disc friction, gland leakage losses and velocity losses.
28.			Governing of steam turbines.
29.			Numericals
30.			NUCLEAR POWER : Fusion, fission,Chain reaction, Different nuclear fuels.
31.			conversion and breeding in nuclear fission,
32.			Classification and working of different reactors CANDU reactor.
33.			components of reactor, coolants, moderators etc.
34.			Different type of reactors such as boiling water,
35.		V	pressurized water Reactor
36.			gas cooled Reactor
37.			Introduction :- Renewable & Nonrenewable sources. Solar Radiation :- Solar constant, basic earth-sun angles
38.			. Spectral distribution of extra terrestrial radiations & its variation.
39.			Different types of collectors
40.			Wind Power:- Wind speed data, power in the wind, wind power development, types of wind mills, application for pumping and power generation.
41.		VI	generation. Biomass Energy Resources : Mechanism of green plant photosynthesis. efficienev of conversion, solar energy plantation,
42.			biogas – Types of biogas plants, factors affecting production rates. Pyrolysis, Gasifiess :
43.			Different types of Biogas plants

Lecture no.	Unit No.	Teaching Plan -Energy Conversion -I
		Topic covered(Description)
1.		Flow diagram for steam power plant with basic units such as steam generator, turbine, condenser and pump.
2.		Introduction to water tube boilers used in thermal power Plants.
3.		Fire Tube boilers
4.		High pressure boilers; Loeffler, Benson, Lamont Boilers.
5.		Boiler mountings —devices for improving Boiler efficiency.
6.		Boiler accessories—devices for improving Boiler efficiency.
7.	I	Principle of fluidized bed combustion, Concept of Cogenration.
8.		Boiler draught; Types of draught.
9.		Expression for diameter & height of chimney, condition for maximum discharge,
10.		Efficiency of chimney, reasons for draught loss.
11.		Boiler rating, boiler power, equivalent evaporation, efficiency
12.		Effect of accessories on boiler efficiancy and heat balance.
13.		Numericals on boilers and Heat balance sheet for boilers
14.	II	Numericals on boilers and Heat balance sheet for boilers
15.		CONDENSERS : Need,Types of condensers, quantity of cooling water required.
16.		Dalton's law of partial pressure, condenser and vacuum efficiency. Sources of air in condensers and its effect on performance.
17.		Condensate pump and air extraction pumps, air enjectors Cooling water system
18.		cooling ponds, spray tanks, cooling towers:
19.	III	Steam nozzles : Flow of steam through nozzles & diffusers, Maximum discharge, critical pressure ratio
20.		Effect of friction. Determination of throat & exit areas
21.		Nozzle efficiency,Numericals
22.		Numericals ,concept of super saturated flow & wilson line
23.		Steam Turbines:- Principle of working, Types of steam turbines such as impulse, reaction, axial & radial flow, back pressure & condensing turbines. Compounding
24.		Reheat,regenerative cycles, blade. Analysis limited to two stages only. Analysis of steam Turbines : Flow of steam through impulse & impulse reaction turbine blading
25.		Velocity diagrams, Graphical & analytical methods for work & power developed
26.	IV	Height of turbine blades & Numericals ,axial thrust and efficiency,Numricals

Execution Plan

Name of Faculty:- _Prof. S. A. Gadam_   Semester _8TH_   Section: A/B/C | C |

Subject Code: _8ME02_   Subject Name: _Robotics._

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
18.	16-2	Teaching of Robot.	✓	
19.	19-2	Robot Programming methods	✓	
20.	20-2	Robot Prog. methods cont.	✓	
21.	22-2	Intro of Unit II & III	✓	
	to	Revision & Practice of		
31.	15-3	Previous Syllabus.	✓	
32.	16-3	Unit 4 :- Robot sensors.	✓	
		Scheme of Robot sensors.	✓	
33.	19-3	Contact type of Sensors,	✓	
34.	20-3	Non contact type sensors	✓	
		Electro optical imaging Sensor.		
35.	22-3	Proximity sensors, range	✓	
		imaging Sensors,		
36.	23-3	Proximity Sensors, range	✓	
		Robot Enviroment.		
37.	26-3	Robot I/P & O/P Interface.	✓	
38.	27-3	Unit 5 :- Robot kinematics	✓	
		forward & Reverse kinematics		
39.	30-3	forward & Reverse transformation	✓	
		of two Dof & three DOF 2-D.		
40.	3-4	Numericals on Dof & three	✓	
		DOF 2-D manipulator.		
41.	5-4	" — numericals	✓	
42.	6-4	" — numericals	✓	
43.	9-4	Numerical Practice.	✓	
44.	10-4	Unit No :- 6 Economic performace of Robot	✓	
45.	12-4	Robot Inust Cost, Operating Expence	✓	
46.	13-4	Pay Back, Return on Inust,	✓	
47.	16-4	Return on Input & Discounted cashflow	✓	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- Prof-S.A. Gedam   Semester 8th   Section: A/B/C   C

Subject Code: 8ME02   Subject Name: Robotics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1.	18-1-21	Introduction, Automation & Robotics Applications	✔	
2.	19-1	Robot Anatomy	✔	
3.	22-1	Robot Wrists, Joint notations	✔	
4.	23-1	Work Volume for Robot.	✔	
5.	25-1	Robot Specifications.	✔	
6.	29-1	Robot configurations.	✔	
7.	30-1	Unit 2:- Robot End effectors Classification of Robot End eff	✔	
8.	1-2	effectors, mechanical Grippers	✔	
9.	2-2	Hooking or lifting grippers.	✔	
10.	5-2	Grippers for molten metals	✔	
11.	6-2	vaccum cup, magnetic Gripper, Electrostatic Gripper	✔	
12.	8-2	Multiple Gripper, Internal & External Gripper.	✔	
13.	9-2	Drive system for Grippers. & active psive grippers.	✔	
14.				
14.	9-2	Unit 3:- Robot drives & control Pneumatic power drives, Hydraulic drives.	✔ ✔	
15.	12-2	Electric drive, Servo Robot	✔	
16.	13-2	Non-Servo Robot, motion Control of Robot.	✔	
17.	15-2	Point to point & conti- nous Path Control.	✔	

38	VI	Methods of economic evaluation
39		Method of pay-back period
40		Return on investment method
41		Discounted cash flow method
42		Practice numericals

EVEN SEM 2020-21
TEACHING PLAN
PROF.S.A.GEDAM   SUB:- ROBOTICS oME02   SEM -EIGHTH

S No	UNIT	TOPIC COVERED
1	I	Introduction, Automation & Roboticsrobot applications robotic systems
2		Robot anatomy and
3		Joi t types used i robots
4		Robot wrists, join otation schemes
5		work value for various robot anato ies
6		Robot Specifications
7		Robot configurations
8	II	Robots end-effectors classification of end-effectors, mechanical grippers,
9		Hooking or Lifting grippers
10		Crippers for molten metals,plastics
11		Vacuum cups,magnetic grippers electrostatic grippers
12		Multiple grippers, internal & external grippers
13		Drive systems for gripers, active & passive grippers
14	III	Robot drives & contro pneumatic power drives, hydraulic systems
15		Electric drives, robot controllers-servo
16		Non servosystems,motion control of robots
17		Point to point and continuous path control
18		Teaching of robots
19		Robot programming methods
20		Robot programming methods cont
21	IV	Robot Sensors ,Scheme of robotic sensors, contact type sensors
22		contact type sensors for force, torque.
23		for touch, position, velocity sensors
24		Non-contact type sensors, electro-optical imaging sensors,
25		Proximity sensors,range imaging sensors,robot environment
26		Robot input/output interfaces,machine intelligence
27		Safety measures in robots
28	V	Robot Kinematics Forward & reverse kinematics
29		forward and reverse transformation of two DOF & three DOF 2-D manipulator
30		Numericals on D JF & three DOF 2-D manipulator
31		Numericals on DOF & three DOF 2-D manipulator cont
32		Numericals on DOF & three DOF 2-D manipulator cont
33		Numericals on DOF & three DOF 2-D manipulator cont
34		Numericals on homogeneous transformations
35		Quantitative Techniques for economic performance of robots
36		Robot investment coats
37		Mobot operating expenses

Denart... ...ate of Techn...

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. S. A Gadam _____ Semester V ___ Section: A/B/C

Subject Code: _____ Subject Name: Measurment System-

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
37.	24-10-20	Various mechanical type of tachmeter.	✗	
38.	28-10-20	Speed measurment numericals	✗	
39.	29-10-20	Electric type of tachometers	✗	
40.	30-10-20	Study of stroboscope	✗	
41.	31-10-20	Vibration measurements Seismic, Strain Gauge.	✗	
42.	2-11-20	Displacement Measurment by LVDT & LDR	✗	
43.	3-11-20	Capacitive & inductive pick up transducers.	✗	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof S.A. Gedam   Semester V   Section: A/B/C

Subject Code: _____   Subject Name: Measurment System

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
20.	19-9-20	Low Pressure measurment Mc leod, Knudsen, ionisation.	d	
2t.	23-9-20	Thermal Conductivity gauge.	b	
22.	24-9-20	Unit No 4:- Introduction to force Measurment : Mechanical.	d	
23.	25-9-20	force measurment by Hydraulic & Pneumatic	d	
24.	26-9-20	force measurment by Electric.	d	
25.	01-10-20	Introduction to flow measurment	d	
26.	03-10-20	Construction of orifice & Rotameter.	d	
27.	07-10-20	Pressure Probes - Pitot static tube Turbine meter.	d	
28.	08-10-20	Unit No.5:- Temperture measurment Standard, various temp measuring devices.	d	
29.	09-10-20	Bimetallic strip, Pressure thermomter.	d	
30.	10-10-20	Thermocouple, Electric Relistone Thermometer.	d	
31.	14-10-20	Radiation Thermometer.	d	
32.	15-10-20	Liquid level measurment Intro	d	
33.	16-10-20	Single float, displacement.	d	
34.	21-10-20	force Transducer, pressure sensitivity Bubbler or purge system.	d	
35.	22-10-20	Capacitance variation type, Resistance variation type.	d	
36.	23-10-20	Unit 6:- Method of speed Measurements Introduction	d	

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. S. A. Gedam ___ Semester V th ___ Section: A/B/C ___ C

Subject Code: ___ Subject Name: Measurment System

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1.	12-8-2020	Unit I : Generalize measurment system & Significance of measurment	✓	
2.	13-8-2020	Application of measuring instrument	✓	
3.	14-8-2020	Types of measuring instrumet.	✓	
4.	19-8-2020	General Configuration & functional element of measuring instrument.	✓	
5.	20-8-20	Types of inputs.	✓	
6.	21-8-20	various methods of correction for interfering & midifiying inputs.	✓	
7.	27-8-20	Unit II : General performance. Characterstics & static characterstics.	✓	
8.	28-8-20	Different types of Errors.	✓	
9.	29-8-20	Combination of component error in overall system.	✓	
10.	2-9-20	General mathematical model for zero order system.	✓	
11.	3-9-20	Mathematical model for 1st & 2nd order	✓	
12.	4-9-20	Responce of first & second order systec	✓	
13.	5-9-20	Step ramp, impluse & frq.	✓	
14.	9-9-20	Unit III :- strain measurment Intro	✓	
15.	10-9-20	Types of strain gauges. & Strain gauge ckt.	✓	
16.	11-9-20	Callibration & Temp compenstion.	✓	
17.	12-9-20	S.T.gauge on rotating shaft, Selecton & Installation of strain gauge.	✓	
18.	16-9-20	Pressure measurment, Methods & strain gauge sells.	✓	
19.	18-9-20	High pressure measurment by Bridgeman type.	✓	

Lr .No	DATE	TOPIC COVERED
1	I	UNIT I : 1. Generalized Measurement system: Significance of measurement
2		application of measuring instruments.
3		Types of measuring instruments.
4		General configuration and functional elements of measuring instruments
5		types of inputs
6		various methods of correction for interfering and modifying inputs.
7	II	UNIT II : General performance Characteristics:-Static characteristics
8		different types of errors,
9		combination of component errors in overall systems.
10		Dynamic characteristics : General mathematical model of zero order
11		first order and second order instruments,
12		response of first and second order instruments
13		step, ramp, impulse and frequency.
14	III	UNIT III Strain Measurement Types of strain gauges,
15		strain gauge circuits
16		calibration, Temperature compensation,
17		strain gauges on rotating shafts,selection and installation of strain gauges.
18		Pressure Measurements,Basic methods of pressure measurement: strain gauge pressure cell
19		High pressure measurement Bridgeman type,
20		low pressure Measurement - Mcleod, Knudsen, ionisation,
21		Thermal conductivity gauges.
22	IV	UNIT IV :-1. Force Measurement: mechanical.
23		Force Measurement by Hydraulic, pneumatic.
24		Force Measurement by electrical methods.
25		Torque and Power Measurements : Various mechanical, hydraulic & electric methods.
26		Flow Measurements : Construction- orifice, Rota meter
27		Pressure probes- Pitot static tube, turbine meter, electro-magnetic flow meter
28	V	UNIT V Temperature Measurements : Standards, Various temperature measuring devices
29		Bimetallic strip, pressure thermometers
30		Thermo couples, electrical resistance thermometers, Thermistors, radiation Thermometers
31		Liquid Level Measurements : Various methods such as- single float, displacement
32		force transducers, Pressure sensitivity, bubbler or Page system
33		capacitance variation type, Resistance variation type
34	VI	UNIT VI Method of Speed Measurements
35		Various mechanical type tachometers
36		Speed mesurment numericals.
37		electrical types tachometers,
38		stroboscope etc.
39		Vibration Measurements : Seismic, Strain gauge .
40		peizoelectic accelerometers.
41		Methods of Displacement measurements
42		Linear and angular displacement measurements
43		Linear variable diffrential Transformer, Light dependent Resistor.
44		CANDCTIVE inductive pick up.
45		inductive pick up.

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Dr. R.A. Kubde   Semester VI   Section: A/B/C

Subject Code: 6ME04   Subject Name: Theory of Machine-II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	1/3/21	Natural freq^n, free longitudinal vibrations	B	
30	2/3/21	Energy & Rayleigh method	B	
31	3/3/21	Effect of inertia constraint in longitudinal vib.	B	
32	4/3/21	Damped vibrations with mass, spring & dashpot	B	
33	5/3/21	logarithmic decrement, transmissibility, vib. isolation	B	
34	8/3/21	Natural freq^n of free transverse vib.	B	
35	9/3/21	Effect of inertia constraints in transverse vib.	B	
36	10/3/21	Natural freq^n of free transverse vib.	B	
37	12/3/21	Uniform distributed load acting on a simply supported shaft.	B	
38	12/4/21	Dunkerley's method, Numericals	B	
39	15/4/21	Torsional vibration, single rotor systems	B	
40	16/4/21	Two rotor system, three rotor system	B	
41	19/4/21	Geared system	B	
42	20/4/21	Graphical method for multi rotor system.	B	
43	21/4/21	whirling of shaft & critical speeds	B	
44	22/4/21	whirling of shaft -II- numericals	B	
45	23/4/21	Balancing of machinery, static & dynamic	B	
46	29/4/21	Balancing of rotating masses in same plane	B	
47	30/4/21	-II- in different transverse plane	C	
48.	3/5/21	Balancing of single cylinder engines	B	
49	4/5/21	-II- multi-cylinder engines	B	
50	5/5/21	Partial balancing of reciprocating masses	B	
51	6/5/21	- Do -	B	
52	7/5/21	Balancing of linkages & machine	B	
53	10/5/21	Numericals	B	
54	11/5/21	Numericals	B	
	12/5/21 0/8/6/21	Revision ⟶	B	

Head
Deptt. of Mechanical Engineering

Execution Plan

Name of Faculty:- Dr. R. A. Kubde Semester VI   Section: A/B/C   B

Subject Code: 6ME04   Subject Name: Theory of Machine - II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18/1/21	Static equilibrium, Superstition principle	B	
2	19/1/21	Static force analysis applied to plane motion	B	
3	20/1/21	virtual work method	B	
4	21/1/21	Static force analysis without & with friction-	B	
5	22/1/21	— DO — & numericals	B	
6	25/1/21	— Do without friction -numerical	B	
7	27/1/21	Theory of hydrodynamic lubrication	B	
8	28/1/21	Boundary lubrication, film lubrication	B	
9	29/1/21	rolling friction, performance of bearing	B	Sign of HOD
10	1/2/21	D'Alemberts principle, Engine force analysis	B	
11	2/2/21	Thrust along connecting rod, turning moment	B	
12	3/2/21	Dynamic equivalent system connecting rod	B	
13	4/2/21	Inertia of the connecting rod	B	
14	5/2/21	Inertia force in reciprocating engines	B	
15	8/2/21	Turning moment dgs for two stroke	B	
16	9/2/21	Four Stroke & multi cylinder engines	B	
17	10/2/21	Fluctuations of speed & energy	B	
18	11/2/21	Flywheel requirements	B	
19	12/2/21	Space mechanism, Gyroscope, gyroscopic effect	B	
20	15/2/21	gyroscopic effect as applied to 4 wheeler	B	
21	16/2/21	— DO — to 2 wheeler	B	
22	17/2/21	Universal joint	B	
23	18/2/21	vehicle dynamics : coefficient of adhesion	B	
24	22/2/21	Resistance to vehicle motion	B	
25	23/2/21	Relative drive effectiveness	B	
26	24/2/21	concept & basic terms of vibratory motions	B	
27	25/2/21	Types of vibrations, element of vibrating system	B	
28	26/2/21	Degree of freedom in mechanical vibratory system	B	

6ME04   Theory of Machine – II
Session: 2020-21

33	**Problems**		
34	**Torsional vibration**, single rotor systems, Two Rotor system		
35	three rotor system		
36	geared systems		UNIT V
37	Graphical method for multi rotor system.		
38	**Whirling of shaft & critical speeds**		
39	Whirling of shaft & critical speeds-Problems		
40	**Balancing of Machinery:-** Static, & dynamic unbalance		
41	balancing of rotating masses in same and different transverse planes		
42	Balancing of single cylinder, multi-cylinder V and radial engines		
43	Partial balancing of reciprocating masses		UNIT VI
44	Balancing of linkages & machine		
45	**Problems**		
46	**Problems**		
47	**Problems**		
48	**Problems**		
Total =			

Teaching Plan

Subject Code: 6ME04   **Subject Name: Theory of Machine-II**

Lecture	Topic	Date	Unit
1	Static equilibrium, superstition principle		
2	**Static force analysis** applied to plane motion mechanisms		
3	Virtual work method		
4	Static force analysis without and with friction-problems		UNIT I
5	Static force analysis without and with friction-problems		
6	Static force analysis without friction-problems		
7	Theory of hydrodynamic lubrication, boundary lubrication		
8	Film lubrication, rolling friction		
9	Performance of bearing		
10	D'Alemberts Principle. Engine force analysis-piston effort		
11	thrust along connecting rod, side of cylinder, on the bearings, crank effort and turning moment on the crank shaft.		
12	Dynamic equivalent system of connecting rod		
13	Inertia of the connecting rod. Inertia force in reciprocating engines (graphical method).		UNIT- II
14	**Turning moment diagrams** for two stroke		
15	four stroke and multi cylinder engines		
16	fluctuations of speed & energy,		
17	**Flywheel** requirements		
18	**Space mechanism:**- Gyroscope, gyroscopic effect as applied to ship ,Aeroplane		
19	gyroscopic effect as applied to 4 wheeler, 2 wheeler		
20	Universal joint.		
21	**Vehical dynamics:**- Coefficient of adhesion,		UNIT -III
22	resistance to vehicle motion		
23	relative drive effectiveness		
24	braking of vehicles		
25	Concept and basic terms of vibratory motions, types of vibrations		
26	basic features or elements of vibrating systems, degree of reedom in mechanical vibratory system		
27	**Longitudinal vibrations-** Natural frequency free longitudinal vibrations by equilibrium, energy and Rayleigh method.		
28	Effect of inertia constraint in longitudinal vibrations		
29	Damped vibrations with mass, spring and dash pot. Definitions of logarithmic decrement, magnification factor, transmissibility, vibration isolation.		UNIT -IV
30	**Transverse vibrations-** natural frequency of free transverse vibrations. Effect of inertia constraints in transverse vibration		
31	Natural frequency of free transverse vibrations due to point load and uniform distributed load acting over a simply supported shaft		
32	Frequency of free transverse vibrations of a shaft subject to a no. of point loads by energy and Dunkerley's method		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Dr. R. A. Kubde Semester I   Section: A/B/C

Subject Code: SFEMEOS   Subject Name: Production Management

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	11/12/20	Stochastic inventory models	B	
30	12/12/20	Inventory control application	B	
31	18/12/20	Just in time manufacturing	B	
32	19/12/20	Quality & quality related costs	B	
33	26/12/20	Quality function deployment (QFD)	B	
34	1/1/21	Taguchi's off-line quality control methods	B	
35	2/1/21	¬. TQM	B	
36	8/1/21	Failure analysis, bath tub curve, reliability	B	
37	9/1/21	Maintainability & availability	B	
				HOD
.				

Odd/~~Even~~ Semester 2020-21)
Execution Plan
Name of Faculty:- Dr. R. A. Kubde Semester V Section: A/B/C

Subject Code: SFEMEO5 Subject Name: Production Management

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	14|8|20	Historical evolution of operations mgt.	B	
2	15|8|20	New product design	B	
3	21|8|20	Manufacturing process technology	B	
4	28|8|20	FMS, CIM	B	
5	29|8|20	Design of services & processes	B	
6	5|9|20	Tools for product development	B	
7	6|9|20	Types of forecasting models	B	
8	12|9|20	Selection of the forecasting models	B	
9	13|9|20	Need for facility location planning	B	
10	19|9|20	Facility location planning & models	B	
11	20|9|20	Facility location layout	B	
12	26|9|20	Effective job design	B	
13	27|9|20	Production & operation standard-	B	
14	02|10|20	Method study	B	
15	3|10|20	Work measurement	B	
16	9|10|20	Capacity measuring	B	
17	10|10|20	Capacity planning modeling	B	
18	23|10|20	Capacity strategies	B	
19	24|10|20	Operation planning & scheduling systems	B	
20	31|10|20	The aggregate planning process & strategies	B	
21	6|11|20	Master scheduling	B	
22	7|11|20	Rough cut capacity planning	B	
23	20|11|20	Aggregate planning for service organizations	B	
24	21|11|20	Loading	B	
25	27|11|20	Sequencing, Expediting	B	
26	28|11|20	Demand & control system characteristic	B	
27	1|12|20	Inventory concepts & costs modeling	B	
28	5|12|20	Deterministic inventory models	B	

Session 2020-21

Teaching Plan

Subject Code: 5FEME05   **Subject Name: PRODUCTION MANAGEMENT**

Lecture	Topic	Date	Unit
1	Historical evolution of operations & production management		UNIT I
2	New product designs		
3	Manufacturing process technology		
4	FMS, CIM		
5	Design of services & service processes		
6	Tools for product development: standardization, simplification, specialization, diversification, product analysis		
7	Types of forecasting models		UNIT II
8	Selection of the forecasting model		
9	Need for facility location planning, procedures for facility location planning		
10	Facility location planning & models		
11	Facility location layout		
12	Facility location layout		
13	Effective job design		UNIT -III
14	Production & operation standard		
15	Method study		
16	Work measurement		
17	Capacity measuring		
18	Capacity planning modeling		
19	Capacity strategies		UNIT -IV
20	Operation planning &scheduling systems		
21	The aggregate planning process & strategies		
22	Master scheduling		
23	Rough cut capacity planning		
24	Aggregate planning for service organizations		
25	Loading		
26	Sequencing		
27	Expediting		UNIT V
28	Demand & control system characteristics		
29	Inventory concepts & costs modeling		
30	Deterministic inventory models		
31	Stochastic inventory models		
32	Inventory control application		
33	Just in time manufacturing		
34	Quality & quality related costs		UNIT VI
35	Quality function deployment (QFD)		
36	Taguchi's off-line quality control methods		
37	Managerial responsibility in managing for products & services		
38	TQM		
39	Failure analysis, bath tub curve, reliability		
40	Maintainability & availability		
41	Problems		
42	Problems		
Total =			

Execution Plan

Name of Faculty:- P. V. Gedam Semester VI Section: A/B/C | F.E |

Subject Code: 6ME05 Subject Name: Automobile Engineeriy

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
24	9-4-21	Sigle plate clutch and	ß	onthe
25	10-4-21	multi plate clutch.	ß	C
26	10-4-21	Gear boxes & its Types.	ß	
27	16-4-21	Slidiy mesh Gearbox	ß	
28	17-4-21	Const. mesh & Synchromesh.	ß	
29	17-4-21	Gearbox. Drive & its Types.	ß	
30	23-4-21	Breakiy System ⟹ Types	ß	
31	24-4-21	of Breaking System	ß	Sorec...
32	24-4-21	Mechanical & Hydraulic Brake.	ß	
33	30-4-21	Steeriy System.	ß	
34	7-5-21	Wheel alisment & balancy.	ß	
35	8-5-21	Toe In , Toe Out,	ß	
36	8-5-21	Caster, Comber, Power Steriy.	ß	
37	15-5-21	Suspersion system & its Types.	ß	
38	15-5-21	Shock absorber & Uses.	ß	
39	21-5-21	Telescopic Shock absorber.	ß	
40	29-5-21	Lubrication & its uses.	ß	
41	29-5-21	Types of lubrication.	ß	
42	4-6-21	Dry & wet Sump Lubrication system	ß	andue

Head
Deptt. of Mechanical Engineerils
P.R.M.I.T & R. Badnera

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- P.V. Gedam   Semester VI   Section: A/B/C   F.E

Subject Code: 6ME05   Subject Name: Automobile Engineering

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD.
1	22-1-21	Introduction about automobile.	✓	online
2	23-1-21	Classification of automobile.	✓	
3	23-1-21	Chassis type & basic parts.	✓	
4	29-1-21	Engine parts & firing order.	✓	
5	30-1-21	CI & SI Engine.	✓	
6	30-1-21	2 Stroke & 4 Stroke engine	✓	
7	5-2-21	Comparision & details about.	✓	
8	6-2-21	Fule feed system.	✓	
9	6-2-21	Fuel filter & air filter	✓	
10	12-2-21	MPFI & CRDI system.	✓	
11	13-2-21	Control system & its types	✓	
12	13-2-21	Types of Cooling system.	✓	
13	20-2-21	Water pump & Radiator.	✓	
14	20-2-21	Anti freeze mixtures.	✓	
15	26-2-21	Electrical system & its parts.	✓	
16	27-2-21	Battery, Battery Capacity,	✓	
17	27-2-21	Battery Rating.	✓	
18	5-3-21	Starter motor drive.	✓	
19	6-3-21	Bendix drive, Solenoid switch	✓	
20	6-3-21	Ignition system - Types of	✓	
21	12-3-21	Battery Ignition system	✓	
22	13-3-21	Transmission system & defination	✓	
23	13-3-21	Clutch & its types of clutch.	✓	online

TEACHING PLAN

Subject: AUTOMOBILE ENGINEERNIG   **Semester: VIth**   Subject

Code: 6ME05

Lecture No.	Unit	Topic Covered	Remark
1	I	Classification of automobiles	
2		chasis types, Power Unit Functions	
3		locations power for propulsion, engine mounting	
4		engine parts- types, construction and functions	
5		Multiple cylinder engines,	
6		General considerations of engine balancing	
7		firing order	
8	II	Fuel feed systems - fuel feed systems for petrol engines	
9		Fuel pumps, fuel filters, Air filters	
10		Basic principles of MPFI and CRDI	
11		Multipoint fuel injection Systems (MPFI) Common Rail Diesel Injection Systems (CRDI) Controlling system	
12		purpose, types of cooling systems, liquid cooling system- water jacket ports	
13		water pump and radiators, by pass recirculatory system	
14		temperature indicator, antifreeze, mixtures	
15		troubles and remedies of cooling system	
16	III	The electrical system	
17		Battery Capacity, standard capacity ratings	
18		starter motor drive-Bendix drive	
19		over running clutch	
20		solenoid switch and shift	
21		Ignition system;- Battery coil ignition system	
22		Ignition timing and its effect on engine performance	
23		Ignition advance mechanisms, Electronic Ignition system	
24	IV	Transmission system : Layout, types of clutches	
25		single plate friction clutch and multiple clutch	
26		clutch adjustments, clutch troubles an remedies	
27		Gear Boxes :- Sliding mesh	
28		constant mesh and synchromesh gear box	
29		function of over drive, trouble shooting and remedies	
30		torque convertor, automatic transmission	
31		Propeller shaft, hotchkiss drive, torque tube drive, differential	
32	V	Breaking system:- Mechanical, hydraulic brakes	
33		power brakes, and vacuum brakes	
34		brakes Fault finding and maintenance of brakes	
35		Steering system :- Function	
36		types of linkages. steering gears	
37		steering gear ratio, wheel balancing	
38		wheel alignment castor, king pin inclination, toe-in & toe-out & their effect	
39		introduction to power steering	
40	VI	Suspensions:- Rigid axle and independent suspension system	
41		shock absorbers	
42		Auto lubrication :- Types of lubrication	
43		their tests and ratings, multi- viscosity oils, chasis lubrication	
44		Engine lubrication :- types of lubricating system	
45		full premier system, dry sump system, oil pump	
46		oil filters system- by pass system, full flow system	
47		oil breather, crankcase ventilation, Engine lubrication troubles and remedies	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. Mr. P.R. Mamanka Semester 6th   Section: A/B/C

Subject Code: 6FEME05   Subject Name: Non-conventional Energy Systems

(FE-II)

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
26	20/3/21	Wind power, Wind speed data	ℓ	Online
27	25/3/21	Wind power devpt	ℓ	→a
28	27/3/21	Types of wind mills, application for pumping, power generation	ℓ	–1t–
29	3/4/21	Units- Direct Energy Conversion-PV cell working principle	ℓ	–1t
30	3/4/21	conversion efficiency power o/p & preformance	ℓ	–11–
31	9/4/21	Fuel Cells, Working principle	ℓ	–1t
32	10/4/21	Types of Fuels cells, conversion eff.	ℓ	–11–
33	10/4/21	Geothermal Energy Resources	Δ	–11–
34	16/4/21	Power generation methods like various don.	ℓ	–1t
35	17/4/21	Binary Fluid & total flow systems	ℓ	–tt
36	17/4/21	Units- Biomass Energy Resources	ℓ	–tt
37	24/4/21	Green plant Photosynthesis, SEP	ℓ	–tt
38	24/4/21	Biogas, types of biogas plant	ℓ	.
39	7/5/21	Pyrolytic process	ℓ	–tt
40	8/5/21	gasification	ℓ	–tt
41	8/5/21	Use of vegetable oil as liquid fuel & their properties	ℓ	–tt
42	15/5/21	Bio-diesel & it's properties	ℓ	tt

Teaching Plan

3ME05 FLUID MECHANICS
III Semester Mechanical Engineering 2020-21

Lecture No	UNIT	Topic to be covered
1.	I	What is fluid? Branches of fluid, application of fluid mechanics
2.		Properties of fluid & problems on it
3.		Surface tension & capillarity
4.		Viscosity & problems on it
5.		Capillary rise & fall
6.		Pascal law & hydrostatic law
7.		Manometers & its types
8.		Hydrostatic Law
9.		Numerical on above
10.		Numerical on above
11.	II	Total pressure & centre of pressure (vertical surface)
12.		Total pressure & centre of pressure (horizontal surface)
13.		Total pressure & centre of pressure (inclined surface)
14.		Buoyancy & flotation
15.		Archimedes principal
16.		Metacentre & metacentric height
17.		Stability of floating body
18.		Numerical on above
19.	III	Kinematics of fluid flow
20.		Types of flows
21.		Flow lines
22.		Continuity equation & its derivation
23.		Bernoulli's equation & its derivation
24.		Venturimeter
25.		Momentum equation, vortex flow
26.		Numerical on above
27.	IV	Boundary layer flow
28.		Separation of boundary layer
29.		Boundary layer thickness
30.		Reynolds experiment
31.		Drag force & lift force
32.		Numerical on above
33.		Numerical on above

34.		Numerical on above
35.	V	Flow through pipes, types of losses
36.		Major loss- Darcy Wisbatch equation
37.		Minor losses- sudden enlargement & contraction
38.		Minor losses- bend, pipe fittings
39.		HGL & TEL
40.		flow through parallel pipes
41.		Water hammer
42.		Numerical on above
43.	VI	Impact of free jet on
44.		Stationary & moving flat plate
45.		Stationary & moving inclined flat plate
46.		Stationary & moving curved plate, velocity diagram
47.		Hydrodynamic machines
48.		Efficiencies of hydraulic machines
49.		Numerical on above
50.		Numerical on above

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Dr. A. D. Shirbhate Semester 3rd Section: A/B/C [C]

Subject Code: 3ME05 Subject Name: Fluid Mechanics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	13/8/20	Fluid & its defination, its branches	AS	online
02	14/8/20	properties of fluid & numericals on it	AS	—//—
03	20/8/20	surface tension & capillarity	AS	—//—
04	21/8/20	viscosity & numerical on it	AS	—//—
05	27/8/20	capillary rise & fall	AS	—//—
06	28/8/20	pascal law & hydrostatic law	AS	—//—
07	3/9/20	Manometer & its classification	AS	—//—
08	4/9/20	Numericals.	AS	—//—
09	5/9/20	Numericals.	AS	—//—
10	10/9/20	Numericals.	AS	—//—
11	11/9/20	Total pressure & center of pressure.	AS	—//—
12	12/9/20	—//—	AS	—//—
13	18/9/20	—//—	AS	online
14	19/9/20	Bouyancy & floation	AS	—//—
15	24/9/20	Archemedie principle.	AS	—//—
16	25/9/20	Metacenter & metacentric height	AS	—//—
17	26/9/20	stability of floating body	AS	—//—
18	1/10/20	Numericals	AS	—//—
19	3/10/20	kinematics of fluid flow	AS	—//—
20	8/10/20	Types of flows.	AS	—//—
21	9/10/20	Flow line & its types.	AS	—//—
22	10/10/20	continuity eqn & its derivation	AS	—//—
23	22/10/20	Bernoulli eqn & its derivation	AS	—//—
24	23/10/20	venturimeter, construction & working	AS	—//—
25	24/10/20	Momentum eqn, vortex flow	AS	—//—
26	29/10/20	Numericals.	AS	—//—

Execution Plan

Name of Faculty:- Dr A D Shirbhate Semester 3rd Section: A/B/C [C]

Subject Code: __3ME05__ Subject Name: __Fluid Mechanics.__

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	31/10/20	Boundary layer flow	AS	online
28	5/11/20	Separation of Boundary layer	AS	—''—
29	6/11/20.	Boundary layer thickness	AS	online
30	7/11/20	Reynould Experiment	AS	—''—
31	12/11/20	Drag force + lift force.	AS	—''—
32	13/11/20	Numericals on above	AS	—''—
33	14/11/20	—''—	AS	online
34	19/11/20	—''—	AS	—''—
35	20/11/20	Flow through pipes losses Darcy eq.	AS	—''—
36	21/11/20	Major losses	AS	—''—
37	26/11/20	Minor losses sudden expansion contraction	AS	—''—
38	27/11/20	Minor losses bend pipe fittings.	AS	—''—
039	28/11/20	HGL & TEL	AS	online
040	3/12/20	flow through parallel pipes.	AS	—''—
41	4/12/20	water hammer	AS	—''—
42	5/12/20	Numericals.	AS	—''—
43	10/12/20	Impact of free Jet velocity	AS	—''—
44	11/12/20	on stationary + moving plate	AS	—''— At
45	12/12/20	on stationary + moving inclind plate	AS	—''—
46	17/12/20	on stationary + moving curved plate	AS	—''—
47	18/12/20	Hydrodynamic machines.	AS	—''—
48	19/12/20	Efficiencies of hydraulic machines	AS	online
49	24/12/20	Numericals	AS	—''—
50	28/12/20	Humericals	AS	—''—
51	31/12/20	Revision 1	AS	—''—
52	1/1/21	Revision 2	AS	—''—
53	2/1/21.	Revision 3	AS	—''—
54	7/1/21	Revision 4	AS	—''—

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

Teaching Plan

4ME05 HYDRAULIC AND PNEUMATIC SYSTEMS
IV Semester Mechanical Engineering 2020-21

Lecture No	UNIT	Topic to be covered
1.		Hydraulic Turbines & its classification
2.		Impulse/Pelton wheel turbine working principles
3.		Velocity diagram, Work done & efficiencies
4.		Reaction/Francis turbine working principle
5.	I	Kaplan turbine working principle
6.		Draft tube, specific speed, characteristic curves
7.		Numerical on above
8.		Numerical on above
9.		Numerical on above
10.		Numerical on above
11.		Pumps & its classification, centrifugal pump
12.		Construction & working of centrifugal pump
13.		Velocity diagram, work done & efficiencies
14.	II	NPSH, cavitation
15.		Pumps in series & parallel
16.		Numerical on above
17.		Numerical on above
18.		Axial flow pump, construction, & operation
19.		construction, & operation of air lift pump
20.		construction, & operation of jet pump
21.	III	construction, & operation of hydraulic ram
22.		Introduction to CFD: Necessity, limitations, philosophy behind CFD, applications
23.		Numerical on above
24.		Positive Displacement and other Pumps:, , performance characteristics.
25.		Reciprocating pump theory & working
26.		Slip, Indicator diagram
27.	IV	Effect of acceleration, air vessels.
28.		Comparison of centrifugal and reciprocating pumps
29.		Numerical on above
30.		Numerical on above
31.		Numerical on above

32.	V	Compressible fluid flow
33.		Perfect gas relationship
34.		speed of sound wave
35.		mach number
36.		Isothermal and isotropic flows
37.		shock waves
38.		Numerical on above
39.		Numerical on above
40.	VI	Hydraulic accumulator
41.		Hydraulic intensifier
42.		Hydraulic Press
43.		hydraulic crane
44.		hydraulic lift, hydraulic coupling,
45.		hydraulic torque converter
46.		Numerical on above
47.		Numerical on above

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)
Execution Plan

Name of Faculty:- Dr. A D Shirbhate Semester 4th Section: A/B/C B

Subject Code: 4 ME05 Subject Name: Hydraulic & Pneumatic System

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21/1/21	Sources of power, hydraulic turbine	AS	onshe
2	22/1/21	classification & parts of turbine	AS	-//-
3	23/1/21	Pelton wheel construction & working	AS	-//-
4	28/1/21	Velocity diagram & efficiencies.	AS	-//-
5	29/1/21	Reaction / Francis turbine	AS	-//-
6	30/1/21	velocity diagram & efficiencies.	AS	-//-
7	4/2/21	Kaplan turbine construction & working	AS	-//-
8	5/2/21	Draft tube, specific speed	AS	-//-
9	6/2/21	Numericals on above	AS	-//-
10	11/2/21	——-//-——	AS	-//-
11	12/2/21	——-//-——	AS	-//-
12	13/2/21	pumps & its classification	AS	-//-
13	18/2/21	centrifugal pump & its classifications	AS	onshe
14	20/2/21	Velocity diagram, WD	AS	-//-
15	25/2/21	NPSH & cavitation	AS	-//-
16	26/2/21	Numericals.	AS	-//-
17	27/2/21	Numericals.	AS	-//-
18	4/3/21	HPSH	AS	-//-
19	5/3/21	pumps in series & parallel	AS	-//-
20	6/3/21	Numericals on above	AS	-//-
21	12/3/21	Numericals on above.	AS	-//-
22	13/3/21	Axial flow pump	AS	-//-
23	15/4/21	Air lift pump .	AS	-//-
24	16/4/21	Jet pump / hydraulic Ram	AS	-//-
25	17/4/21	Reciprocating pump & its classification	AS	-//-
26	22/4/21	slip / indicator diagram	AS	-//-

Execution Plan

Name of Faculty:- Dr. A.D. Shirbhale Semester 4th Section: A/B/C B

Subject Code: 4ME05 Subject Name: Hydraulic & pneumatic systems

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	23/4/4	Effect of acceleration	AS	online
28	24/4/21	Numericals.	AS	—||—
29	29/4/21	Numericals.	AS	—||—
30	30/4/21	Comparision bet'n Centrifugal & Reciprocting pump	AS	—||—
31	1/5/21	Numericals.	AS	—||—
32	6/5/21	Compressible fluid flow	AS	—||—
33	7/5/21	perfect gas relationship.	AS	—||—
34	8/5/21	Speed of sound wave.	AS	—||—
35	13/5/21	mach number	AS	—||—
36	14/5/21	Isothermal & isotropic flow.	AS	—||—
37	15/5/21	shock waves.	AS	—||—
38	20/5/21	Numericals	AS	—||—
39	21/5/21	Numericals.	AS	online
40	22/5/21	Hydraulic accumulator	AS	—||—
41	27/5/21	Hydraulic intensifier	AS	—||—
42	28/5/21	Hydraulic press	AS	—||—
43	29/5/21	Hydraulic crane	AS	—||—
44	3/6/21	Hydraulic lift/coupling	AS	—||—
45	4/6/21	Hydraulic torque converter	AS	—||—
46	5/6/21	Numericals	AS	—||—
47	10/6/21	Numericals.	AS	—||—
48	11/6/21	CFD & its definition	AS	—||—
49	12/6/21	philosophy behind CFD	AS	—||—
50	17/6/21	CFD application	AS	—||—
51	18/6/21	Demonstration of CFD	AS	—||—
52	19/6/21	—||—	AS	—||—

AS

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

TEACHING PLAN

Subject: AUTOMOBILE ENGINEERNIG   **Semester: VIth**   **Subject**
Code: 6ME05

Lecture No.	Unit	Topic Covered	Remark
1	I	Classification of automobiles	
2		chasis types, Power Unit Functions	
3		locations power for propulsion, engine mounting	
4		engine parts- types, construction and functions	
5		Multiple cylinder engines,	
6		General considerations of engine balancing	
7		firing order	
8	II	Fuel feed systems - fuel feed systems for petrol engines	
9		Fuel pumps, fuel filters, Air filters	
10		Basic principles of MPFI and CRDI	
11		Multipoint fuel injection Systems (MPFI) Common Rail Diesel Injection Systems (CRDI) Controlling system	
12		purpose, types of cooling systems, liquid cooling system- water jacket ports	
13		water pump and radiators, by pass recirculatory system	
14		temperature indicator, antifreeze, mixtures	
15		troubles and remedies of cooling system	
16	III	The electrical system	
17		Battery Capacity, standard capacity ratings	
18		starter motor drive-Bendix drive	
19		over running clutch	
20		solenoid switch and shift	
21		Ignition system;- Battery coil ignition system	
22		Ignition timing and its effect on engine performance	
23		Ignition advance mechanisms, Electronic Ignition system	
24	IV	Transmission system : Layout, types of clutches	
25		single plate friction clutch and multiple clutch	
26		clutch adjustments, clutch troubles an remedies	
27		Gear Boxes :- Sliding mesh	
28		constant mesh and synchromesh gear box	
29		function of over drive, trouble shooting and remedies	
30		torque convertor, automatic transmission	
31		Propeller shaft, hotchkiss drive, torque tube drive, differential	
32	V	Breaking system:- Mechanical, hydraulic brakes	
33		power brakes, and vacuum brakes	
34		brakes Fault finding and maintenance of brakes	
35		Steering system :- Function	
36		types of linkages. steering gears	
37		steering gear ratio, wheel balancing	
38		wheel alignment castor, king pin inclination, toe-in & toe-out & their effect	
39		introduction to power steering	
40	VI	Suspensions:- Rigid axle and independent suspension system	
41		shock absorbers	
42		Auto lubrication :- Types of lubrication	
43		their tests and ratings, multi- viscosity oils, chasis lubrication	
44		Engine lubrication :- types of lubricating system	
45		full premier system, dry sump system, oil pump	
46		oil filters system- by pass system, full flow system	
47		oil breather, crankcase ventilation, Engine lubrication troubles and remedies	

Execution Plan

Free Elective

Name of Faculty:- R.S.Sakarkar   Semester 6th   Section: A/B/C

Subject Name: Automobile Engg.

Subject Code: 6ME05

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	22-01-21	Introduction to various Automobile vehicles, Vehicle working process		
02	23-01-21	Classification of Automobile, Types.		
03	23-01-21	Basic parts of Autombiles & its Chassis		
04	29-01-21	Engine Parts & Firing Order		.
05	30-01-21	C.I and S.I. Engine.		
06	30-01-21	Two stroke / Four stroke Engine		
07	05-02-21	Multiple cylender Engines.		●
08	06-02-21	Fuel Feed Sys. for petrol & Diesel Engine		.
09	06-02-21	Fuel Filters and Air Filters.		
10	12-02-21	MPFI & CRDI sys, Basic Principles		
11	13-02-21	Types of cooling sys., Air & Liquid		
12	13-02-21	Function of Radiator, By pass.		
13	20-02-21	Coolents Types, Antifreeze Mixtures		
14	20-02-21	Importance of cooling sys.		.
15	26-02-21	Electrical system and its parts.		●
16	27-02-21	Battery capacity, Std capacity Ratings		
17	27-02-21	Starter Motor Drive		.
18	05-03-21	Starter - Bendix Drive		
19.	06-03-21	Ignition system; Types.		
20	06-03-21	Battery Coil Ignition Sys.		
21	12-03-21	Electronic Ignition Sys. CDI		
22	13-03-21	Transmission Sys. Leyoul & Working		
23	13-03-21	Principle of clutch, Types.		
24	09-04-21	Single Plate Clutch, Adv. & Limitation		
25	10-04-21	Multi Plate Clutch, Adv. & Limitation		

Head,
Dept. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- R.S.Sakarkar   Semester 6th   Section: A/B/C   Free Elective

Subject Code: 6MEO5   Subject Name: Automobile Engg.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
26	10-04-21	Gear Box. & its types	Sak	
27	16-04-21	Sliding Mesh Gear Box	Sak	
28	17-04-21	Const Mesh & synchromesh	Sak	
29	17-04-21	Gear box Drive & its types.	Sak	
30	23-04-21	Breaking Sys & its Types	Sak	
31	24-04-21	Types of Mechanical & Hydraulic Breakey.	Sak	
32	24-04-21	Steering System, steering Gears	Sak	
33	30-04-21	Wheel balancing & Alignments.	Sak	31
34	07-05-21	Introduction to power Steering.	Sak	
35	08-05-21	Electric Steering sys.	Sak	
36	08-05-21	King pin Inclination, Caster Angle.	Sak	
37	15-05-21	Suspension Sys. & its Types.	Sak	
38	15-5-21	Shock Absorbers & it Applications	Sak	
39	21-05-21	Auto Lubrication & its Types.	Sak	
40	29-05-21	Oil Ratings, Multiviscosity oils	Sak	
41	29-05-21	Engine Lubrication - Types	Sak	
22	04-06-21	crank case ventilation	Sak	

Teaching Plan

Subject Code: **3ME3**   Subject Name: **Fluid power - I**

Lecture	Topic	Date	Unit
01	Introduction to study of fluid	20/8/20	I
2	Basic definitions of fluid	21/8/20	
3	Mechanical properties of fluid	27/8/20	
4	Surface tension & capillary Action	28/8/20	
5	Influence of mech prop. on flow	29/8/20	
6	measurement of pressure	03/9/20	
7	Mechanical Gauges	04/9/20	Unit I
8	Fluid pressure & its variation	05/9/20	
9	Buoyancy & floatation.	10/9/20	
10	metacentre & metacentric Ht.	11/9/20	
11	Hydrustatic forces on walls.	12/9/20	*
12	Pressure head & pascal's law	17/9/20	
13	kinematics of fluid flow	18/9/20	
14	stream lines, flow press.	19/9/20	
15	Potential lines & flow net	24/9/20	
16	& continuity equation	25/9/20	
17	velocity potential	26/9/20	
18	one & two diamential flow	01/10/20	
19	measurement of flow Analysis.	03/10/20	Unit II
20	continuity equation	08/10/20	
21	Bernoulli's equation	09/10/20	
22	Practical Application of Ber. eqn.	10/10/20	
23	venturimeter, its const.	22/10/20	
24	application of ventorimeter.	23/10/20	Unit III
25	Momentum equation of flow.	24/10/20	
26	Momentum equation for steadyflow	29/10/20	
27	free & forced vurtex motion	31/10/20	
28	momentum correction factor	05/11/20	*
29	kinetic energy & its eqn	06/11/20	
30	flow-through pipes	07/11/20	
31	Darcy weisbach equation	19/11/20	Unit IV
32	Equation of pipe flow	20/11/20	
33	Friction charts & its equation	21/11/20	

Name of Subject Teacher

Prof. A. K. Pitale

Teaching Plan

Subject Name: Fluid Power - I

Subject Code: 3 ME3

Lecture	Topic	Date	Unit
34	Major & minor losses in Pipes	26/11/20	↑
35	losses due to sudden enlargement	27/11/20	
36	contration losses, Hydraulic gradient	28/11/20	Unit IV
37	Pipes in series & parallel	03/12/20	
38	Elementry concept of water Hammer	04/12/20	↓
39	Dynamic action of fluid force	05/12/20	↑
40	exerted on by jet on plane &	10/12/20	
41	curved surfaces. Stationary Vanes	17/12/20	Unit V
42	velocity diagrams.	19/12/20	
43	work done by impact of Jet	24/12/20	↓
44	pressure due to deviated flow	31/12/20	↑
45	Eulers eqn of motion, classification	01/1/21	Unit VI
46	of machines as per degree of reaction	02/1/21	
47	volumetric efficiency, Hydraulic	08/1/21	
48	Mechanical & overall efficiency	09/1/21	↓

Head
Deptt. of Mechanical Engineering,
P.R.M.I.T & R. Badnera

Name of Faculty: Prof. A. K. Pitale   Semester 3rd   Section: A/B/C   [A]

Subject Code: 3ME3   Subject Name: Fluid power-I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	20/8/20	Introduction to the subject		
2	21/8/20	Basic Definitions of Fluid.		
3	27/8/20	Viscosity & specific gravity		
4	28/8/20	Surface tension & capillary action		
5	29/8/20	Measurement of pressure, manometers		
6	03/09/20	Mechanical Gauges		
7	04/09/20	Hydrostatic forces on surfaces		
8	05/9/20	Numericals on above topics		
9	10/9/20	Pressure, pressure head, Pascal's law		
10	11/9/20	Buoyancy & floatation, centre of Buoy.		
11	12/9/20	Metacentre & Metacentric height		
12	17/9/20	Derivation of hydrostatic forces		on
13	18/9/20	Inclined plane surface force calc.		Line
14	19/9/20	Numericals on above topics.		Classes
15	24/9/20	Kinematics of fluid flow, stream line.		
16	25/9/20	Types of fluid flows & its equations.		
17	26/9/20	Flow measurement & continuity eq.		
18	01/10/20	Numericals on above topics.		
19	03/10/20	Velocity potential & stream fn.		
20	08/10/20	Numericals on above topics.		
21	09/10/20	Diff. types of heads of liq. in motion		
22	10/10/20	Bernoulli's Equation & its derivation.		
23	22/10/20	Practical application of Bernoulli's eq.		
24	23/10/20	Venturimeter & its derivation.		
25	24/10/20	Numericals on above topic.		
26	29/10/20	Impulse momentum equation.		
27	31/10/20	Free & forced vortex motion		
28	05/11/20	Kinetic energy & momentum correction factor.		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- **A. K. Pitale**   Semester **3rd**   Section: A/B/C   **A**

Subject Code: **3 ME3**   Subject Name: **Fluid Power - I**

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	06/11/20	Liquids in relative equillibrium	↑	↑
30	07/11/20	Numericals on above topics.		
31	19/11/20	flow through pipes.		
32	20/11/20	Loss of energy (Head) in pipe		
33	21/11/20	Darcy Weisbach equation		
34	26/11/20	Major Losses in pipes eqn.		
35	27/11/20	Numericals on above topics		
36	28/11/20	Derivation of Venturimeter & app.		
37	03/12/20	chezy's formula for losses of heads		
38	04/12/20	Equivalent Pipes, H.G.L & T.E.L		on line class
39	05/12/21	Numericals on above topics	✓	
40	10/12/20	Boundary layer flow concept		
41	17/12/20	Boundary layer thickness		
42	19/12/20	Displacement & energy thickness		
43	24/12/20	Reynold's exp. & flow separation		
44	31/12/20	Drag & lift forces on objects		
45	01/1/21	Numericals on above topics		
46	02/1/21	Impact of Jet on plates		
47	08/1/21	Derivation of Dynamic thrust on plate. ↓		✗

Teaching Plan

Subject Code: 4 ME1   Subject Name: Fluid Power II

Lecture	Topic	Date	Unit
1	Theory of Impulse turbines	21/1/21	I
2	—"—	22/1/21	
3	—"—	23/1/21	'
4	Theory of Reaction turbines	28/1/21	
5	—"—	29/1/21	
6	—"—	30/1/21	
7	construction & working of Pelton Turbine	4/2/21	
8	—"—	5/2/21	
9	—"—	6/2/21	
10	—"—	11/2/21	unit I
11	const. & working of Francis turbine	12/2/21	
12	—"—	13/2/21	
13	—"—	18/2/21	
14	—"—	21/2/21	
15	const. & working of Kaplan turbine	25/2/21	
16	—"—	26/2/21	
17	—"—	27/2/21	
18	Analysis of Pelton, francis & Kaplan turbine	04/3/21	
19	—"—	05/3/21	
20	Characteristics & governing of all turbine	06/3/21	
21	Draft tube & unit Quantities.	12/3/21	
22	Centrifugal pump Basic theory	13/3/21	
23	centrifugal pump classification	15/4/21	Unit II
24	centrifugal pump construction	16/4/21	
25	operation & characteristics of Pump	17/4/21	
26	multistaging, NPSH of cen. pump	22/4/21	
27	cavitation of centrifugal Pump	23/4/21	
28	Axial flow pump Basic theory	24/4/21	
29	const. & operation of Axial flow pump	29/4/21	
30	Air lift pump, Jet pump & Hyd. Ram	30/4/21	unit III
31	computational fluid Dynamics	06/5/21	
32	Application of CFD for industries	7/5/21	
33	Reciprocating pump Basic theory	8/5/21	

Name of Subject Teacher

Prof. A. K. Pitale

Teaching Plan

Subject Code: 4 B M E 1

Subject Name: fluid Power II

Lecture	Topic	Date	Unit
34	const; installation of Reci. Pump	13|5|4	I
35	Rotary pump const. Variable delivery pump	15|5|4	unit IV
36	Installation & Charactristics of pump.	20|5|4	↓
37	Flow of compressible fluid Introd.	21|5|4	↑
38	Speed of sound wave, mach No.	22|5|4	unit V
39	Isothermal, Isotropic flows.	27|5|4	
40	Shock wave, fano & Rayleigh lines.	28|5|4	↓
41	Perfect gas Relationship	29/5/21	↑
42	Introduction to hydrostatic sys.	3|6|21	
43	components & Application of above sys.	4|6|21	
44	components & application of Hyd. lift	5|6|21	unit VI
45	crane & fluid drives for machine tools	10|6|21	
46	Intensifire & accumulator	11|6|21	
47	Hydrokinetic system Introduction	12|6|21	
48	fluid coupling & torque converter.		↓

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

Name of Subject Teacher

Prof. A. K. Pitale

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. A. k. Pitale   Semester 5th   Section: A/B/C   A

Subject Code: 4 ME1   Subject Name: Fluid Power II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21/1/21	Intro to subject		
2	22/1/21	Layout of Hydro plant		
3	23/1/21	Pelton wheel turbine const.		
4	28/1/21	velocity diag.		
5	29/1/21	derivation of w.D & Power		
6	30/1/21	Numericals		
7	4/2/21	Numericals		
8	5/2/21	francis turbine		
9	6/2/21	velo diag, const. & working		
10	11/2/21	Intermediate eqn & theory		
11	12/2/21	Draft tube const.		
12	13/2/21	Numericals		on
13	18/2/21	kaplan turbine const.		line
14	21/2/21	Numericals		classes
15	25/2/21	centrifugal pump Intro.		
16	26/2/21	const & working of —"—		
17	27/2/21	velo. diag & tech terms		
18	4/3/21	Numericals		
19	5/3/21	multistaging of cent. pump		
20	6/3/21	manometric head & losses		
21	12/3/21	Numericals		
22	13/3/21	Axial flow pump, Jet Pump		
23	15/4/21	CFD & its app.		
24	16/4/21	Air lift pump working		
25	17/4/21	Reciprocating pump Intro.		
26	22/4/21	Discharge, work done, power		
27	23/4/21	Aten Numericals —		
28	24/4/21	— Numericals —		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. K. Pitale   Semester 5th   Section: A/B/C   A

Subject Code: _____   Subject Name: fluid power II

4 BME 1.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	29/4/21	Indicator diag. theory	∧	∧
30	30/4/21	— Numricals —		
31	6/5/21	Single & Double acting R.Pump.		
32	7/5/21	Air vessel, Rotary pump		
33	8/5/21	Numericals.		
34	13/5/21	Numericals		(
35	15/5/21	Gear Pump, Vane pump Intro		
36	20/5/21	Piston pump working		
37	21/5/21	Numericals on above topic		
38	22/5/21	Flow of comp. fluids		
39	27/5/21	Isothermal process eqn		on
40	28/5/21	Isothermal process eqn contl.		Line
41	29/5/21	Numericals on topics		classes
42	3/6/21	Mach Number		
43	4/6/21	Interpretation of mach No.		
44	5/6/21	Properties of sound wave		
45	10/6/21	Sound wave porperties		(
46	11/6/21	Numericals on above topic ↓		↓
47	12/6/21	Hydrostatic & Hydro Kinetic systems.		

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

TEACHING PLAN

Subject: AUTOMOBILE ENGINEERNIG VIIIth   **Subject Code: 8ME01**   **Semester:**

Lecture No.	Unit	Topic Covered	Remark
1	I	Classification of automobiles	
2		chasis types, Power Unit Functions	
3		locations power for propulsion, engine mounting	
4		engine parts- types, construction and functions	
5		Multiple cylinder engines,	
6		General considerations of engine balancing	
7		firing order	
8	II	Fuel feed systems - fuel feed systems for petrol engines	
9		Fuel pumps, fuel filters, Air filters	
10		Basic principles of MPFI and CRDI	
11		Multipoint fuel injection Systems (MPFI) Common Rail Diesel Injection Systems (CRDI) Controlling system	
12		purpose, types of cooling systems, liquid cooling system-water jacket ports	
13		water pump and radiators, by pass recirculatory system	
14		temperature indicator, antifreeze, mixtures	
15		troubles and remedies of cooling system	
16	III	The electrical system	
17		Battery Capacity, standard capacity ratings	
18		starter motor drive-Bendix drive	
19		over running clutch	
20		solenoid switch and shift	
21		Ignition system;- Battery coil ignition system	
22		Ignition timing and its effect on engine performance	
23		Ignition advance mechanisms, Electronic Ignition system	
24	IV	Transmission system : Layout, types of clutches	
25		single plate friction clutch and multiple clutch	
26		clutch adjustments, clutch troubles an remedies	
27		Gear Boxes :- Sliding mesh	
28		constant mesh and synchromesh gear box	
29		function of over drive, trouble shooting and remedies	
30		torque convertor, automatic transmission	
31		Propeller shaft, hotchkiss drive, torque tube drive, differential	

32		Breaking system:- Mechanical, hydraulic brakes	
33		power brakes, and vacuum brakes	
34		brakes Fault finding and maintenance of brakes	
35		Steering system :- Function	
36	V	types of linkages. steering gears	
37		steering gear ratio, wheel balancing	
38		wheel alignment castor, king pin inclination, toe-in & toe-out & their effect	
39		introduction to power steering	
40		Suspensions:- Rigid axle and independent suspension system	
41		shock absorbers	
42		Auto lubrication :- Types of lubrication	
43		their tests and ratings, multi- viscosity oils, chasis lubrication	
44	VI	Engine lubrication :- types of lubricating system	
45		full premier system, dry sump system, oil pump	
46		oil filters system- by pass system, full flow system	
47		oil breather, crankcase ventilation, Engine lubrication troubles and remedies	

Execution Plan

Name of Faculty:- _D. S. Thakare_   Semester _VIII_   Section. A/B/C

Subject Code: **BMEC1**   Subject Name: ~~BMEC1~~ _Automobile Engineering._

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29.	6/3/21	Power transmission system in A.E. layout, working of each system for pair front.	A.	
30.	8/3/21	clutch, types & working & clutch material use fr manu. of clutch	A.	
31.	9/3/21	clutch adjustment, advancement in clutch, troubles & remedies	A.	
32.	10/3/21	Gear Boxes, classification, Reverse gear	A.	
33.	10/4/21	sliding mesh, const. mesh & synchromesh, type of gearbox.	A.	
34.	27/4/21	torque convertor & automatic transmissn	A.	
35.	22/4/21	Propeller shaft, torque-tube drive, hotch kiss drive, working & constr. troubles	A.	
36.	29/4/21	Differential, gear arrangment, power transmission	A.	
37.	3/5/21	MCQ's over 4ᵗʰ unit.	A.	
38.	4/5/21	Breaking system, classification, need, construction, working	A.	
39.	5/5/21	Mech., hydraulic, vaccume & power brake.	A.	
40.	6/5/21	Breaking syst. linkages, maintanance, application & advance tech.	A.	
41.	10/5/21	Steering system of automobile, function	A.	
42.	11/5/21	Steering gear, steering gear ratio and etc. & working & box.	A.	
43.	12/5/21	Classification of steering system, constr, working, adv. & dis.adv. troubles	A.	
44.	13/5/21	intro. to power steering & comparison	A.	
45.	17/5/21	wheel balancing, allignment, camber, caster, toe-in/out, king-pin inclination	A.	
46.	18/5/21	MCQ's on 5ᵗʰ unit.	A.	
47.	19/5/21	suspension system, link with chasis, shock absorbers	A.	
48.	20/5/21	classification, Rigid axle, independant, front & rear suspension system.	A.	
49.	24/5/21	linkages in suspension system, power trans.	A.	
50.	1/6/21	lubrication system of automobile & chasis.	A.	
51.	2/6/21	multi-viscosity oils, test, rating, types.	A.	
52.	3/6/21	Engine lubrication system, dry & wet	A.	
53.	8/6/21	oil pump, oil filter, oil breather, crankcase ventillation	A.	
54.	9/6/21	Engine lubrication, trouble & remedies	A.	
55.	10/6/21	MCQ's on 8ᵗʰ unit.	A.	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. P. Thakare   Semester VIII   Section: A/B/C

Subject Code: 8ME01   Subject Name: Automobile Engineering

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1.	18/01/21	Introduction to automobile & its parts	A.	
2.	19/01/21	Classification of automobile, chasis & its types.	A.	
3.	20/01/21	Power unit, parts, function, location.	A.	
4.	21/01/21	power transmission in automobile. engine construction & functn'.	A.	
5.	25/01/21	Multi.cylinder engine, engine balancing. terms related to engine health.	A.	
6.	27/01/21	firing order of 2.stroke, 4.stroke & multi cylinder engine.	A.	
7.	28/01/21	mcq's over 1st unit.	A.	
8.	1/2/21	fuel feed system of automobile (SI & CI) fuel pump, fuel filter, air filter.	A.	
9.	2/2/21	classification, need & working of fuel supply system.	A.	
10.	3/2/21	MPFI system, working, constrn., adv.& dis-adv.	A.	
11.	4/2/21	CRDI system, working, constru. ECU, adv. & dis-adva.	A.	
12.	8/2/21	Cooling system in automobile, type & needs.	A.	
13.	9/2/21	Air cooling, liquid cooling, free & forced, constru! & working.	A.	
14.	10/2/21	Radiators, water pump, by-pass retrocular.	A.	
15.	11/2/21	Anti-freeze mixture, tempe.indicator.	A.	
16.	15/2/21	Troubles & its remedies of cooling syst.	A.	
17.	16/2/21	mcq's on 2nd unit.	A.	
18.	17/2/21	Electrical system, parts, working in automobik.	A.	
19.	18/2/21	Batteries, capacity, rating, efficiencies.	A.	
20.	22/2/21	Starter motor drive, Bendix drive, working, construction, adva.	A.	
21.	23/2/21	over.running clutch, solenoid switch & shift.	A.	
22.	24/2/21	ignition system, spark plug, material, ignition period, delay period.	A.	
23.	25/2/21	Battery coil.ignition system, constru, working.	A.	
24.	1/3/21	capacitor, power, storage in capacitor distributor, primary & sec.cumding.	A.	
25.	2/3/21	magneto & electronic ignition system adv. & dis.advantage.	A.	
26.	3/3/21	mcq's over 3rd unit.	A.	

Head
Deptt. of Mechanical Engineering
PRMIT & R Badnera

TEACHING PLAN

Subject: NON-CONVENTIONAL ENERGY SYSTEMS

Semester: VIIth

Subject Code: 7ME05

Lecture No.	Unit	Topic Covered	Remark
1		Introduction :- Renewable & Non-renewable resources.	
2		Solar Radiation- Solar Constant basic earth-sun angles spectrum distribution of extra terrestrial radiations and its variation.	
3		Solar time, Direction of beam radiation,	
4	I	computation of radiation inclined surfaces, solar charts,	
5		measurements of diffuse & global & direct radiations,	
6		duration of sunshine hours, computation of radiation data	
7		Alteration of solar radiation by the atmosphere.	
8		Radiation transmission through covers :- Reflection and absorption of radiation	
9		optical properties of cover systems in transmittance effects of surface layers on transmittance,	
10		transmittance absorptance product.	
11	II	Solar Energy collections;- Heat transfer for solar energy utilization, flat plate collections such as liquid & air collector	
12		collector overall heat transfer coefficient, temperature distribution between the tubes & the collector	
13		efficiency factor useful heat gain , heat removal and flow factor	
14		Testing of collectors & effects of various parameters on the performance	
15		Introduction to various systems of concentrating collectors	
16		Solar energy Utilization :- Application of solar energy in heating, cooling	
17		pumping, power production, distillation	
18		drying, solar cookers, solar pond, solar furnaces	
19	III	Solar Energy Storage :Methods	
20		storage such as sensible, latent heat	
21		thermochemical storage, selection of method of storage	
22		properties of storage materials	
23		different arrangements of storages	
24		Energy from Ocean : Tidal Power, Ocean thermal energy conversion system.	
25	IV	Types of tidal plants such as single basin	
26		two basin plants, power developed and operation of tidal power plant.	

27		Ocean temp. profile, OTE Power plant development,	
28		controlled, flash evaporation, indirect vapour cycle	
29		Salinity differences conversion of salinity gradient resources, osmotic pump, dialytic battery	
30		Wind speed data, power in the wind, wind power development	
31		types of wind miles, application for pumping and power generation	
32		Biomass Energy Resourses; Mechanism of green plant photosynthesis	
33		efficiency of conversion, solar energy plantation,	
34		Biogas- Types of Biogas plants, factors affecting production rates,	
35	V	Pyrolysis, Gasifess Types & Classification of vegetable oils a a liquid fuel and their properties	
36		esterification process, formation of Biodiesel, Biodiesel & its properties	
37		suitable species for Biodiesel formation and its cultivation	
38		byproduct formation during esterification	
39		Biodiesel economics.	
40		Direct Energy Conversion systems	
41		Photo voltaic cells: Principle, concept of energy conversion	
42		conversion efficiency, power output and performance	
43		Storage of energy.	
44	VI	Fuel Cells : Principles types of fuel cells	
45		conversion efficiency, Geothermal energy resources	
46		power generation methods like vapour dominated, water dominated, flash steam	
47		binary fluid and total flow concept of power generation	

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A.P. Thakare

Subject Code: TME05   Semester VII th   Section: A/B/C

Subject Name: Non-Conventional Energy Sources

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1.	17/8/20	Introduction to Renewable & Non-renewable energy sources.	A.	
2.	18/8/20	Solar radiation, earth-sun angles.	A.	
3.	21/08/20	Spectrum distribution, terrestrial & extra-terrestrial radiation.	A.	
4.	24/08/20	radiation on inclined surface, solar charts.	A.	
5.	25/8/20	Duration of sunshine hours, measurements of direct & diffuse radiation.	A.	
6.	28/8/20	Numericals on radiation & sunshine hrs.	A.	
7.	29/8/20	Computation & Alteration of solar radiat	A.	
8.	30/8/20	Reflection & absorption of radiation.	A.	
9.	1/09/20	Optical properties of cover system in transmittance.	A.	
10.	4/9/20	transmittance & absorptance product.	A.	
11.	5/09/20	Heat transfer for solar energy utilization.	A.	
12.	7/09/20	flat plate collector in liquid & Air.	A.	
13.	8/09/20	overall heat transfer coeffi of collector.	A.	
14.	11/09/20	Heat gain, heat removal & flow factor being tubes & collector.	A.	
15.	14/09/20	Testing & effects of various parameters on collector.	A.	
16.	15/09/20	Intro. to concentrating collector.	A.	
17.	18/09/20	Solar energy utilization & Application	A.	
18.	19/09/20	solar heater, solar cooler, solar pump.	A.	
19.	21/09/20	Solar thermal generation, drying, distillat	A.	
20.	22/09/20	Space cooling, solar pond, solar furnaces	A.	
21.	3/10/20	Solar energy storage system.	A.	
22.	5/10/20	Sensible & latent heat storage	A.	
23.	6/10/20	Selection method & properties of storage.	A.	
24.	9/10/20	MCQ's over appli. of solar storage syst.	A.	
25.	19/10/20	Energy from ocean. Tidal power & ocean thermal energy conversion.	A.	
26.	20/10/20	Construction & working of single Basin.	A.	
27.	23/10/20	Double basin plant, working & constr.	A.	
28.	26/10/20	Temp. profile, OTEC plant development.	A.	

Name of Faculty:- λ. P. Thakare _____ Semester V Dth Section: A/B/C

Subject Code: 3ME05   Subject Name: Non-Conventional Energy Sources

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	27/10/20	controlled & flash evaporation.	A.	
30	31/10/20	Salinity gradient resources, indirect vapour cycle,	A.	
31	2/11/20	osmotic pump & Dynamic batt. Megw.	A.	
32	3/11/20	wind speed data, Power in wind.	A.	
33	23/11/20	Types of wind mills.	A.	
34	24/11/20	wind power development.	A.	
35	27/11/20	Appli. of wind power, pumping & power generation. & mcqs.	A.	
36	1/1/21	Biomass resources, photosynthesis process	A.	
37	4/1/21	conversion efficiency, solar energy plantation.	A.	
38	5/1/21	Biogas plant, classification, factors affecting prod. rate	A.	
39	7/1/21	Pyrolysis & Gasifiers.	A.	
40	8/1/21	Bio-fuels & its properties.	A.	
41	11/1/21	esterification process & Biodiesel formation process, & its property.	A.	
42	14/1/21	suitable species for biodiesel, its cultivication	A.	
43	15/1/21	Bio-diesel economics & byproduct	A.	
44	18/1/21	mcq's on Biogas & Biodiesel.	A.	
45	19/1/21	Direct energy conversion systems	A.	
46	21/1/21	Photovoltaic cell: conversion efficiency.	A.	
47	22/1/21	power output, performance & storage.	A.	
48	1/2/21	Concept of fuel cells.	A.	
49	2/2/21	Types of fuel cells & conversion effi.	A.	
50	3/2/21	Geothermal energy resources.	A.	
51	5/2/21	vapour dominated & water dominated power generation system.	A.	
52	8/2/21	flash steam type power plant, binary fluids, concept of power generation	A.	
53	9/2/21	mcq's on geothermal & ... cells	A.	

Head
Dept. of Mechanical Engineering
PRMIT & R Badnera

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. A.S. Deshmukh   Semester 6th   Section: A/B/C   [C]

Subject Code: 6ME02   Subject Name: CSA -

	Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
Unit I	01	18/01/21	Int. to DBMS	ASP	
	02	20/01/21	Database system application, Purchase of database system	ASP	
	03	25/01/21	view of data, database languages	ASP	
	04	27/01/21	Relational databases, transaction mangemt.	ASP	
	05	01/02/21	Database Architecture, Database users.	ASP	
Unit 2	06	02/02/21	Structure of selectional database	ASP	
	07	05/02/21	fundamental selectional algebra operations.	ASP	
	08	08/02/21	Null values, Modification of the database.	ASP	
	09	09/02/21	Entity Relational design issues.	ASP	
	10	10/02/21	Extended E-R Features, Other aspects of database	ASP	
	11	15/02/21	the unified modelling languages.	ASP	
Unit 3	12	16/02/21	Database design & the E-R model.	ASP	
	13	17/02/21	& its various constraints ER-diagram	ASP	
	14	22/02/21	Database design of banking enterprise.	ASP	
	15	23/02/21	Reduction to relational schemas.	ASP	
	16	24/02/21	Additional Relational Algebra operation.	ASP	
	17	25/02/21	Extended Algebra operations.	ASP	
Unit 4	18	26/02/21	Introduction to SQL	ASP	
	19	27/02/21	Data defin, structure of SQL, set operan	ASP	
	20	01/03/21	Aggregate funth, Null values.	ASP	
	21	02/03/21	Nested sub queries, complex queries, Joined relation	ASP	
	22	03/03/21	SQL data types & schemas	ASP	
	23	08/03/21	Integrity constraints.	ASP	
Unit 5	24	09/03/21	Int. to Artificial Intelligence.	ASP	
	25	10/03/21	Scope of AI, knowledge base Approach	ASP	
	26	12/03/21	concepts of expert systems.	ASP	

2020-21

2020-21

Odd/Even Semester 2021-21

Execution Plan

Name of Faculty:- Prof A s bedhmukh   Semester 6th   Section: A/B/C   C

Subject Code: 6ME02   Subject Name: CSA

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	13/03/21	characteristics of ES, elements of ES	ASP	
28	15/03/21	Application of ES, domains of ES	ASP	
29	15/03/21	what is modelling & simulation	ASP	
30	16/03/21	Types of model, need of system modelling	ASP	
31	17/03/21	system approach to modelling	ASP	
32	17/03/21	Introduction to simulation, steps in simulⁿ	ASP	
33	18/03/21	Advantges, disadvances of simulation	ASP	
34	18/03/21	Modelling of simulation, environment	ASP	
35	19/03/21	components of system simulation	ASP	Sign 20
36	19/03/21	simulation languages a packages	ASP	

unit 6

Teaching Plan

Subject: Computer Software Applications   Semester: VI   Subject Code: 6 E02

Lecture No.	Unit	Topic covered
1	I	Introduction to data base management system (DBMS)
2		Database system application, purpose of database systems,
3		View of data, database languages,
4		Relational databases, transaction management,
5		Database architecture,
6		Database users and administrators.
7	II	Structure of relational database
8		Fundamental relational algebra operation
9		Fundamental relational algebra operation
10		Null values, Modification of the database.
11		Entity relational design issues
12		Extended E-R features, other aspects of database design
13		The unified modeling languages
14	III	Database design and The entity relational model
15		Constraints
16		Entity relationship diagrams, Weak entity sets
17		Database design of banking enterprise,
18		reduction to relational schemas
19		Additional relational algebra operation
20		Extended Algebra Operations
21	IV	Structured Query Language(SQL) : Introduction,
22		Data definition
23		Basic structure of SQL queries,
24		Set operations
25		Aggregate functions, null values
26		Nested sub queries, complex queries
27		View, modification of the database
28		Joined relations,
29		SQL data types and schemas,
30		Integrity constraints
31	V	Artificial Intelligence: Introduction to AI,
32		its definition and scope,
33		Knowledge based approach,
34		Concept of expert system (ES)
35		Characteristics of ES, Elements of ES,
36		Application of ES, domains of ES.
37	VI	Modeling and Simulation : Model, advantages of modeling,
38		Types of model, need of system modelling.
39		System approach to modeling.
40		Introduction to simulation,
41		Modeling of simulation, environment, Component of system,
42		Steps in simulation,
43		Advantages and disadvantages of simulation,
44		Simulation Languages and packages.

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. A.S. Deshmukh   Semester 3rd   Section: A/B/C   C

Subject Code: 3ME05   Subject Name: ~~potho~~ fluid Mechanics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	13/08/20	Introduction to the study of fluid motion	ASD	
02	14/08/20	Types of fluids	ASD	
03	20/08/20	Mechanical Properties of fluids	ASD	
04	21/08/20	influences on fluid & Problems based prop.	ASD	
05	27/08/20	Fluid Pressures.	ASD	
06	28/08/20	Fluid Pressures.	ASD	
07	29/08/20	Pressure variation in fluids	ASD	
08	03/09/20	Pressure variation in fluids.	ASD	
09	04/09/20	manometer, different types	ASD	
10	05/09/20	expressions based on different mano.	ASD	
11	10/09/20	problems on different manometers.	ASD	
12	11/09/20	forces on plane & curved surface buoyancy	ASD	
13	12/09/20	Hydrastatic Pressure forces.	ASD	
14	17/09/20	on plane & curved surfaces	ASD	
15	18/09/20	Problems based on above topics.	ASD	
16	19/09/20	Measurement of total pressure & coutse of psa.	ASD	
17	24/09/20	Expression of total & centre of pressure	ASD	
18	25/09/20	problems on total psa & centre of psa.	ASD	
19	26/09/20	Introduction to buoyancy & floatation.	ASD	
20	01/10/20	Metacentre & metacentric height & problems.	ASD	
21	03/10/20	Various condition of equilibrium of floating & submerged body	ASD	
22	08/10/20	Introduction to Kinematic of fluid flow	ASD	
23	09/10/20	various methods of describing fluid motion, Types of flow, rate of flow	ASD	
24	09/10/20	velocity & acceleration based equations.	ASD	
25	10/10/20	definition Continuity equation & expression for 3 dimension	ASD	
26	15/10/20	Introduction to fluid flow dynamics of fluid flow	ASD	
27	16/10/20	Eulers equation of motion (expression)	ASD	
28	17/10/20	Problems, Intro. to Bernoulis equation	ASD	

unit-1 → 01

unit-2 → 13

unit-3 → 22

Name of Faculty:- Prof. A.S Deshmukh Semester 3rd   Section: A/B/C   C

Subject Code: 3ME05   Subject Name: Fluid mechanics

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	22/10/20	expression for Bernoulli's equation path	ASP	
30	23/10/20	Venturimeter expression & problems	ASP	
31	24/10/20	Intro to flow through pipes & classification of losses	ASP	
32	29/10/20	Major losses (Darcy & weisbach equn)	ASP	
33	29/10/20	Minor losses (sudden enlargement) expression	ASP	
34	31/10/20	expression for sudden contraction	ASP	
35	5/10/20	Problems on minor & major losses	ASP	
36	6/10/20	expression for, entry, exit & pipe fittings	ASP	
37	7/10/20	what is H.G.L & T.G.L (problems)	ASP	Sign of
38	12/10/20	flow through series & parallel pipes	ASP	
39	13/11/20	Concept of Water Hammering	ASP	
40	14/11/20	Intro. to motion of viscous flows	ASP	
41	19/11/20	what is laminar & turbulent flow	ASP	
42	20/11/20	concept of boundary layer & its types	ASP	
43	21/11/20	what is drag force & lift forces	ASP	
45	26/11/20	problems on drag force & lift force	ASP	
46	27/11/20	concept of boundary layer seperation	ASP	
47	28/11/20	concept of boundary layer seperation	ASP	
48	03/12/20	what is Reynolds number, expression & problems of R.N.	ASP	
49	04/12/20	Int of Principal of fluid machinery	ASP	
50	05/12/20	Expression & problems based on	ASP	
51	10/11/20	force exerted by jet on plane curved,	ASP	
52	12/11/20	stationary & moving vanes.	ASP	
53	17/11/20	what is velocity diagram / its importance	ASP	
54	19/11/20	what is work done & efficiency	ASP	
55	24/11/20	problems on work done & efficiency	ASP	

unit IV (rows 31-...)
unit V
unit VI (row 49-...)

Teaching Plan

Subject: Fluid Mechanics   Semester: III   Subject Code: 3ME05

Lecture No.	Unit	Topic covered
1		Introduction to the study of fluid motion
2		Basic properties of fluid
3		Viscosity of fluid, Surface Tension
4		Capillarity, vapour pressure & cavitation
5		pressure & its measurement
6		Pascals law, Hydrostatic law of pressure
7	I	pressure variation in fluid, measurement of pressure by Manometer
8		pressure variation in fluid, measurement of pressure by Manometer
9		measurement of pressure by Manometer
10		measurement of pressure by Manometer
11		Mechanical properties of fluids and their influence on flow characteristics
12		Mechanical properties of fluids and their influence on flow characteristics
13		Hydrostatic pressure force on plane & curved surfaces.
14		Hydrostatic pressure force on plane & curved surfaces.
15		Measurement of total pressure & centre of pressure.
16	II	Buoyancy & floatation: Concept of buoyancy centre of buoyancy
17		Stability of floating body
18		Metacentre & metacentric height
19		Condition of equilibrium of floating & sub-merged body
20		Condition of equilibrium of floating & sub-merged body
21		Kinematics of fluid flow
22		Methods of describing fluid motion
23		Types of flow, rate of flow, streamline
24	III	potential line, flow net
25		velocity & acceleration, continuity equation in three dimensional flow
26		Eulers equation of motion, , Bernoullis equation
27		measurement of fluid flow with venture meter
28		Introduction to Flow through pipes
29		Losses in pipe, major losses, Darcy's Weisbach equation
30		Losses in pipe, major losses, chezys equation
31	IV	monor losses due to sudden enlargement, contraction
32		, entry, exit & pipe fitting
33		Hydraulic gradient & total energy line
34		flow through series & parallel pipes,
35		concept of water hammer in pipes
36		Motion of viscous fluid
37		Introduction to Laminar & Turbulent flow
38	V	Concept of Boundary layer & its type.
39		Drag & Lift force on object.
40		Boundary layer separation, Reynolds number & its significance
41		Boundary layer separation, Reynolds number & its significance
42		Principal of fluid machinery
43		Force exerted by fluid jet on plane, curved, stationary & moving vanes.
44	VI	Force exerted by fluid jet on plane, curved, stationary & moving vanes
45		Velocity diagrams, work done & efficiency
46		Velocity diagrams, work done & efficiency
47		Velocity diagrams, work done & efficiency

Teaching Plan
V Semester Mechanical
Subject: (5ME02) Heat Transfer

L.N.	Unit	Topic	Remark
1.		Introduction, Applications of heat transfer in engineering.	
2.		Modes of heat transfer, basic laws of heat transfer and their basic equations.	
3.		Conduction- thermal conductivity, effect of phase & temperature on thermal conductivity.	
4.		one dimensional steady state heat conduction through slab, cylinder & sphere- simple	
5.	I	one dimensional steady state heat conduction through slab, cylinder & sphere- composite	
6.		Combined conduction- convection, overall heat transfer coefficient.	
7.		General heat conduction differential equation.	
8.		One dimensional steady state conduction with internal heat generation for infinite slab	
9.		One dimensional steady state conduction with internal heat generation for wire & cylinder	
10.		Insulations, critical radius of insulation, insulation thickness.	
11.		Conduction through extended surfaces	
12.		Analysis of a uniform c.s. fin	
13.	II	Fin efficiency, fin effectiveness	
14.		Biot number, its effect on effectiveness	
15.		Introduction to unsteady state heat conduction, Newton's law of cooling	
16.		Lumped heat capacity analysis.	
17.		lumped heat capacity analysis, contd.	
18.		Radiation- general concepts and definitions, black body & grey body concept.	
19.		Laws of radiation-Kirchoff's law, Planck's law,	
20.		Wien's displacement law, Stephen Boltzmann'law, Lambert's cosine law	
21.	III	Concept of shape factor , emmisivity factor	
22.		Heat transfer coefficient of radiation, radiation heat transfer equation	
23.		Radiation errors in temperature measurement	
24.		Radiation shield.	
25.		Forced convection- heat convection, forced and natural convection	
26.		Boundary layer theory- hydrodynamic boundary layer,	
27.		thermal boundary layer, boundary layer thickness	
28.		Laminar & turbulent flow over flat plate and through pipes & tubes	
29.	IV	Dimensionless numbers-Reynold, Prandtl, Nusselt, Grashoff number.	
30.		Physical significance of these numbers	
31.		Empirical correlations for forced convection for flow over flat plate, through pipes & tubes.	
32.		Applications of these numbers & correlations in problem solving	
33.		Free convection- velocity and thermal boundary layers for vertical plate	
34.		Free convection over vertical cylinder and horizontal plate/cylinder	
35.		The empirical correlations for the above configurations	
36.	V	Use of empirical correlations in problem solving.	
37.		Condensation & Boiling - Introduction to condensation heat transfer, film & drop condensation	
38.		Boiling heat transfer	
39.		Pool boiling curves	
40.		Heat exchangers – introduction , applications, classification	
41.		Overall heat transfer coefficient- concept & formulae	
42.		Fouling of heat exchangers, fouling factors, effect on heat exchanger performance	
43.	VI	Analysis of heat exchangers- LMTD method,	
44.		Effectiveness & ENTU method	
45.		Temperature profiles, Selection of heat exchangers	
46.		Introduction to working of heat pipe with and without wick	

Execution Plan

Name of Faculty:- Ankush S. Patil   Semester V H   Section: A/B/C   C

Subject Code: 5ME02   Subject Name: Heat Transfer

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11/08/20	Introduction, Application of Heat Transfer in Engineering		Online Class
2	12/08/20	Modes of Heat transfer, Basic law of Heat transfer		—))—
3	14/08/20	Conduction-Thermal Conductivity, effect of Phase and temperature on thermal Conductivity		—))— —))—
4	20/08/20	One diamensional steady state heat Conduction through slab, Cylinder and Sphere simple		—))— —))—
5	21/08/20	One diamensional steady state heat conduction through slab, cylinder and sphere. Composite		—))— —))—
6	24/08/20	Combine Conduction convention, Overall heat transfer.		—))—
7	28/08/20	General heat conduction differential equation.		—))—
8	2/09/20	One diomensional steady state conduction with. Internal heat goneration for infinite slab.		—))— —))—
9	3/09/20	One diamensional Steady state conduction with Internal heat generation for wire & cylinder		—))— —))—
10	7/09/20	Numerical.		—))—
11	8/09/20	Numerical.		—))—
12	10/09/20	Insulation, Critical radius of insulation, insulation thickness.		—))—
13	14/09/20	Conduction through extended s/f, Analysis of uniform fin		—))—
14	18/09/20	Fin efficiency, fin-effectiveness & Numerical		—))—
15	22/09/20	Biot No. its effect on effectiveness & Numerical		—))—
16	28/09/20	Introduction to unsteady state heat Cond., Nevton law of Cooling		—))—
17	30/09/20	Lumped heat capacity analysis & Numerical		—))—
18	1/10/20	Numerical		—))—
19	5/10/20	Radiation-general Concept & definition/Black Grey Body.		—))—
20	8/10/20	Law of Radiation :- Kirchoffs law, planks law		—))—
21	12/10/20	Wien's displacement law, stephon Boltzman law, Lambert-cosine law.		—))—

Execution Plan

Name of Faculty:- Ankush S. Patil   Semester V th   Section: A/B/C   [C]

Subject Code: 5ME02   Subject Name: Heat Transfer.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
22	13/10/20	Concept of shape factor, emmjsitivity factor		Online Class
23	16/10/20	Heat transfer coefficient of Radiation		—11—
24	19/10/20	Concept of Radiation sheild & Numericals of Radiation		—11—
25	20/10/20	Forced convention-heat conv^n, Free&Forced Conv^n		—11—
26	28/10/20	Boundary layer theory, Hydrodynamic boundary layer		—11—
27	29/10/20	Thermal boundary layer, Boundary layer thickness.		—11—
28	3/11/20	Laminar and turbulent flow over flat Plate & through pipe		—11— ●
29	4/11/20	Diamensionless No. Reynold, Prandtl, Nuselt, Grashoff		—11—
30	6/11/20	Empirical correlation for forced convention		—11—
31	20/11/20	Application of these No.& Correlation in Problem solving		—11—
32	23/11/20	Free Convention-velocity & thermal boundary layer for vertical plate		—11—
33	25/11/20	Free convention over vertical cylinder & Horizontal plate/tube		—11—
34	26/11/20	The empirical correlation in problem solving & Numerical		—11—
35	2/12/20	Condensation and Boiling:-Condensation: Dropwise/Filmwise		—11—
36	3/12/20	Boiling heat transfer and pool boiling curves.		—11—
37	4/12/20	Numericals.		—11—
38	8/12/20	Heat Exchanger-Introduction, Application, Classifiation.		—11— ●
39	9/12/20	Overall heat transfer coefficient, Concept & formula		—11—
40	10/12/20	Fouling heat exchanger, Fouling factor, Effect on Heat exchanger		—11—
41	14/12/20	Analysis of heat exchanger- LMTD method		—11—
42	15/12/20	Effectiveness & ENTU method & Numerical		—11—
43	17/12/20	Temperature profile, Selection of Heat exchanger		—11—
44	18/12/20	Introduction to working of Heat pipe with/without wick		—11—
45	22/12/20	Numerical		—11—
46	28/12/20	Numerical.		—11—
47	30/12/20	Multiple choice questions		—11—
48	1/01/21	Multiple choice questions.		—11—
49	4/01/21	Multiple choice questions.		—11—

Head
Dept. of Mechanical Engineering
PRMIT & R Badnera

Teaching Plan

Subject: Refrigeration & Air-Conditioning   **Semester: VIII**   **Subject Code: 8ME02**

Lecture No.	Unit	Topic covered	Remark
1	I	Basics of Refrigeration & Introduction to Vapour compression system.	
2		Analysis of simple vapour compression system, Use of P-h & T-S charts	
3		Effect of operating conditions such as evaporation and condensation pressure	
4		Effect of superheating and sub cooling.	
5		Actual vapour compression system.	
6		Refrigerants :- classification: primary & secondary refrigerants, desirable properties of refrigerants	
7		merits & demerits of commonly used refrigerants such as Ammonia R-12, R-22 and their selections	
8		eco friendly refrigeration 134 a, HFC	
9	II	Introduction to Multi stage pressure systems.	
10		Multistage compression: choice of intermediate pressure	
11		Complete multi-stage compressions.	
12		Multi evaporator systems	
13		single compression individual expansion value, single compression multi expansion valve	
14		Individual compressor multi expansion valves.	
15		cascade systems, its applications to cryogenics	
16		Air liquefaction processes- Linde- Hampson	
17		Numerical	
18		Numerical	
19	III	Introduction to Refrigeration systems components & controls.	
20		Brief study of refrigerants compressor	
21		Condensers, evaporators	
22		Expansion valves, drier, fillers	
23		Selection criteria for the components of vapours compression systems	
24		Flow controls, temperature controls, pressure controls and safety devices	
25		Defrosting systems	
26		Testing & charging of refrigeration systems, leak detection	
27	IV	Psychromeric properties of moist air.	
28		Psychrometric chart, concept of thermodynamic wet –bulb temperature	
29		Representations of Psychromeric process on Psychromeric charts, mixing of air	
30		Evaporating cooling, air washers	
31		Human comfort:- metabolism of human body, factors influencing comfort	
32		Concept of effective temperature, optimum effective temperature & comfort charts	
33		Numerical	
34	V	Introduction to air conditioning systems.	
35		Unitary system, package, window type & split type air conditioning.	
36		Central system components, types.	
37		Direct expansion system, all water system & all air system	
38		Summers & year round air conditioning	
39		Transmission & distribution.	

40		Types of supply air ducts	
41		Consideration for selection & location of outlet.	
42		Distribution partners of outlet, location	
43		Introduction to Load calculation & applied Psychromety	
44		basic consideration at heat gains/losses sensible & latent , heat due to occupancy lightening, appliances, products	
45		air conditioning systems	
46	VI	safety factor cooling load estimates, heating load estimates	
47		Sensible heat factor by pass factor	
48		apparatus dew point, effective sensible heat factor	
49		Numerical	
50		Numerical	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Ankush S. Patil   Semester VIIIth   Section: A/B/C   [C]

Subject Code: 8ME02   Subject Name: Refrigeration & Air conditioning

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19/1/21	Basic of Refrigeration & Introduction to VCR System.	✗	Online Class
2	22/1/21	Analysis of simple VCR, Use of P-h & T-s diagram	✗	—)) —
3	23/1/21	Effect of operating condn such as evpn & condn pressure	✗	—)) -
4	25/1/21	Effect of superheating and subcooling.	✗	—)) —
5	30/1/21	Actual vapour compression system & VAR system	✗	—)) —
6	1/2/21	Refrigerant:- classification, primary & secondary refrigerant, Desirable properties of refrigerants	✗	—)) - / —)) —
7	5/2/21	Merits and Demerits of commonly used refrigerant such as Ammonia, R12, R22 and their selection	✗	—)) — / —)) —
8	6/2/21	Ecofriendly refrigeration R134a, HFC.	✗	—)) —
9	8/2/21	Numericals.	✗	—)) —
10	9/2/21	Introduction to multistage pressure Systems.	✗	—)) —
11	12/2/21	Multistage compression: Choice of Intermidate pressure	✗	—)) —
12	13/2/21	Complete multistage pressure systems.	✗	—)) —
13	15/2/21	Multi- evaporator systems.	✗	—)) —
14	16/2/21	Single compression individual expansion valve	✗	—)) —
15	20/2/21	Single compression multistage expansion valve	✗	—)) —
16	22/2/21	Individual compressor multi-expansion valve	✗	—)) —
17	26/2/21	Cascade systems, its application to Cryogenics	✗	—)) —
18	27/2/21	Air liquefaction process-Linde Hampson	✗	—)) —
19	1/3/21	Numerical.	✗	—)) —
20	2/3/21	Numerical.	✗	—)) —
21	5/3/21	Introduction to refrigeration system Comp & Control.	✗	—)) —
22	6/3/21	Breif study of refrigerants - Compressor.	✗	—)) —
23	8/3/21	Condensers, Evaporators.	✗	—)) —
24	9/3/21	Expansion valve, drier, filter.	✗	—)) —

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Ankush S. Patil   Semester VIII th   Section: A/B/C   C

Subject Code: 8 ME02   Subject Name: Refrigeration and Air Conditioning

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
25	12/3/21	Selection criteria for the components of VCR system		Online Class
26	13/3/21	Flow control, Temp-Pressure control, Safety device		—)) —
27	12/4/21	Defrosting system, Testing & Charging of refrigerant		—)) —
28	16/4/21	Psychrometric properties of moist air.		—)) —
29	17/4/21	Psychrometric chart, Concept of DBT, WBT, DPT.		—)) —
30	19/4/21	Representation of psychrometric process & chart		—)) —
31	20/4/21	Mixing of air, Evaporative cooling, Air-washer		—)) ●
32	24/4/21	Human-Comfort:-Metabolism of Human body & its factor.		—)) —
33	26/4/21	Concept of Effective temp, Optimum effective temp.		—)) —
34	30/4/21	Numerical.		—)) —
35	3/5/21	Introduction to Air-Conditioning systems		—)) —
36	4/5/21	Unitary systems, package, window, & split type A.c.		—)) —
37	7/5/21	Central systems components, types, Direct exp^n System		—)) —
38	8/5/21	All water system and All Air systems		—)) —
39	10/5/21	Summer & year round - Air-Conditioning.		—)) —
40	11/5/21	Transmission and distribution, Type of supply, A rd & t		—)) —
41	15/5/21	Consideration of selection of Outlet, distribution		—)) ●
42	17/5/21	Introduction to load calculation & Applied Psychrometry.		—)) —
43	18/5/21	Consideration of Heatgain/losses, Sensible & latent Heat		—)) —
44	22/5/21	Cooling load estimation, Heating load estimation		—)) —
45	24/5/21	Sensible heat factor, Bypass factor, Apparatus dewpoint		—)) —
46	25/5/21	Effective room sensible heat factor (RSHF + GRSHF)		—)) —
47	28/5/21	Numerical		—)) —
48	31/5/21	Numerical		—)) —
49	01/6/21	Multiple choice questions.		—)) —
50	4/6/21	Multiple choice questions.		—)) —
51	5/6/21	Multiple choice questions.		—)) —
52	8/6/21	Multiple choice questions		—)) —

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badn...

Teaching Plan
VIII Semester Mechanical
Subject: (8SM3) Automobile Engineering

L.N.	Unit	Topic	Remark
1.		Subsystems of automobile	
2.		Classification of automobiles, chassis, layout types, specifications of automobile	
3.		Power Unit:-Functions and locations, power for propulsion,	
4.	I	Acceleration, hill climbing, gradiability	
5.		Engine mounting, engine parts-	
6.		Types, construction and functions	
7.		Multiple cylinder engines. General considerations of engine balance, vibration	
8.		Firing order, road performance curves	
9.		Fuel feed systems for petrol engines,	
10.		fuel pumps	·
11.		Fuel filters, fuel gauges, air filters	
12.	II	Basic principles of MPFI and CRDI". Multipoint Fuel Injection systems (MPFI)	
13.		Common Rail Diesel Injection systems (CRDI), Cooling system-purpose, types	
14.		Liquid cooling system-water jackets and ports, water pump and radiators	
15.		By pass recirculation system	
16.		Temp indicators, antifreeze mixtures, troubles and remedies	
17.		The electrical systems, Battery Capacity- standard capacity rating, battery life	
18.		Testing, recharging, starter motor drives-bendix	
19.		Overrunning clutch drive, solenoid switch	
20.	III	Ignition system:- Battery coil	
21.		Magneto ignition system	
22.		Ignition timing and its effect on engine performance	
23.		Ignition advance mechanisms	
24.		Electronic ignition system	
25.		Transmission system:- Construction, transmission, requirements of single plate friction clutch and multi plate, clutch	·
26.		Clutch adjustments, clutch troubles and remedies	·
27.	IV	Gear Boxes : Sliding mash, constant mesh	
28.		Synchromesh gear box	
29.		Function of over drives, trouble shooting and remedies	
30.		Propeller shaft, hotchkiss drive	
31.		Torque tube drive, differential	
32.		Braking system:- Mechanical, hydraulic brakes	
33.		Power brakes, and vacuum brakes	
34.		Fault finding and maintenance of brakes	
35.	V	Steering system:- Function, types of linkages	
36.		Steering gears	
37.		Steering gear ratio, reversibility of steering gears	
38.		Wheel alignment, camber, castor, king pin inclination, toe-in and toe-out and their effects, Introduction to power steering	
39.		Suspensions :- Rigid, axle and independent suspension system	
40.		Types of shock absorbers	
41.		Auto lubrication:- Types of lubricants, their tests and ratings	
42.	VI	Multi viscosity oils, chassis lubrication	
43.		Engine lubrication: types of lubricating systems	·
44.		Oil pump, oil filters systems-by pass system, full flow system	·
45.		Oil breather, crank case ventilation, Engine lubrication troubles and remedies	

Name of Faculty:- A. S. Saktare   Semester VIIIth   Section: X/B/C | A |

Subject Code: _____   Subject Name: Automobile Engg.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18 - 1-21	Career Guidance	✦	online clots
2	19 - 1-21	Career Guidance	✦	-11-
3	20 -1-21	Unit I - Introduction to Automobil	✦	-11-
4	21 - 1	Classification of Automobile	✦	- 11 -
5	01 - 02	Types of Chassis Layout	✦	-11-
6	02 - 2	Types of Engine part	✦	-11-
7	03 - 2	multiple cylinder engine	✦	-11-
8	04 - 2	Firing order	✦	-11-
9	08 - 2	Engine & it's function	✦	-11-
10	09 - 2	Hill climbing	✦	-11-
11	10 - 2	Unit II Fuel feed System	✦	-11-
12	11 - 2	Types of fuel pimp	✦	-11-
13	18 - 2	Fuel fillers & Air filter	✦	- 11 -
14	23 - 2	MPFI	✦	-11-
15	24 - 2	CRDI	✦	-11-
16	25 -2	Types of cooling system	✦	-11-
17	02 - 03	Cooling system	✦	-11-
18	03 - 3	Unit III Intro. to Electrical Sys	✦	-11-
19	04 - 3	std. capacity Ratings	✦	-11-
20	09 - 3	Ignition system -	✦	-11-
21	10 - 3	magneto system	✦	-11-
22	12 - 4	Ignition adv. mechanism	✦	-11-
23	15 - 4	Electrical ignition system	✦	-11-
24	19 - 4	Starter motor drive.	✦	-11-
25	20 - 4	Unit IV Transmission system	✦	-11-
26	29- 4	Types of clutch & it's working	✦	-11-
27	3 - 5	Clutches	✦	-11-
28	5 - 5	Types of Gear Box	✦	-11-

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. S. Sakhare Semester VIII Section: A/B/C   A

Subject Code: _____ Subject Name: Automobile Engg.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	6-5	Differential Gear working		Online clrs
30	10-5	Hotchkiss drive		-"-
31	11-5	Torque tube drive		-"-
32	12-5	Core Clutch		-"-
33	17-5	Unit V Braking System		-"-
34	19-5	mechanical & Hydraulic Brake.		-"-
35	20-5	Steering System		-"-
36	24-5	Types of Steering System		-"-
37	27-5	Power steering		-"-
38	1-6	Unit VI Introduction to suspension		-"-
39	2-6	Types of shock absorber		-"-
40	3-6	Types of lubricant		-"-
41	7-6	Engine lubricant		-"-
42	8-6	Suspension System		-"-
43	9-6	oil pump & crank case vent"		-"-

PRMRIT&R, Badnera

Dept. of Mechanical Engineering

Teaching Plan

Class: Vth Semester

Subject: Production Technology

Unit I:

Lecture No.	Topic to be Covered
1	Introduction to subject
2	Concept of quality and quality control
3	Quality of design and quality of conformance, Quality characteristics
4	Cost of quality & Value of quality, Specification of quality, quality control & inspection
5	Concept of TQM & Quality assurance
6	Concept of variation, variable and attribute data, Frequency distribution
7	Measures of Central tendency-Mean, mode & median
8	Measures of dispersion.-Range, std. deviation & variance

Unit II:

Lecture No.	Topic to be Covered
1	Concept of universe and population, Normal distribution curve
2	Control charts for variables
3	Control charts for variables, process capability
4	Control charts for attributes
5	Control charts for attributes, comparison between variable charts and attribute charts
6	precision & accuracy, Sampling plans
7	Sampling plans, Quality circle
8	Operating Characteristic curve

Unit III:

Lecture No.	Topic to be Covered
1	Definition & Basic principles of work study
2	Method study: introduction, objective, procedure
3	Process charts: flow process charts, Operation process chart
4	Principles of motion economy, multiple activity chart
5	Two handed process chart, simo chat
6	Work measurement : definition, techniques, time study, rating system
7	Work measurement : allowances, std, time estimation, PMTS, MTM

Unit IV:

Lecture No.	Topic to be Covered
1	Standards of measurements: line standards, end standard, wave length standard
2	Limits, fits and gauges : terminology of limits, Fits and gauges
3	Limits, fits and gauges : terminology of limits, Fits and gauges
4	Problems on limits & Fits
5	Concept of interchangeability, allowance, tolerance
6	Indian Standard Specification for limits, fits and gauges, B.S. System
7	Limit gauging - design of Go, No Go gauges
8	Limit gauging - design of Go, No Go gauges

Unit V:

Lecture No.	Topic to be Covered
1	Linear measurement: mechanical comparator(principle, operations and applications)
2	Linear measurement: electrical comparator(principle, operations and applications)
3	Linear measurement: optical, pneumatic comparators(principle, operations and applications)
4	Angular measurements: vernier, optical, bevel protractor
5	Angular measurements: universal bevel protector, Sine bar level clinometers
6	Angular measurements: taper gauges
7	Thread measurement: screw thread limit and fit limits gauging of screw threads
8	Thread measurement: screw thread limit and fit limits gauging of screw threads

Unit VI:

Lecture No.	Topic to be Covered
1	Gear measurement : alignment error
2	master gear, Parkinson tester
3	Study and use of optical dividing head
4	Study and use of auto collimator, tool makers microscope
5	Interferometry, flatness testing
6	Squareness testing, Surface texture testing
7	Coordinate measuring machine- types, role and application

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A.S. Sakhare   Semester V th   Section: A/B/C   B

Subject Code: 05MF02   Subject Name: Production Technology

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	11-8-20	Career Guidance		online class
02	12-8-20	Career Guidance		—"—
03	13-8-20	Unit -I. Introduction to subject		—"—
04	18-8-20	Concept of quality & qualey control		—"—
05	19-8-20	quality of Design & conformance		—"—
06	20-8-20	quality control & Inspection		—"—
07	24-8-20	Cost of quality & value of quality		—"—
08	25-8-20	Concept of variation		—"—
09	27-8-20	central tendancy		—"—
10	03-9-20	Problems		—"—
11	07-9-20	Problems		—"—
12	8-9-20	Unit -V Linear measurement		—"—
13	9-9-20	Comparator - mech. & Electrical		—"—
14	10-9-20	Reed type Comparator		—"—
15	15-9-20	sigma Comparator		—"—
16	21-9-20	Bevel Protractor & Universal		—"—
17	23-9-20	Screw thread limit & fit		—"—
18	24-9-20	Thread measurement		—"—
19	28-9-20	Unit VI Gear Terminology		—"—
20	29-9-20	Gear measurement - Alignment Error		—"—
21	01-10-20	Master & Parkinson Gear		—"—
22	05-10-20	Optical Dividing Head		—"—
23	07-10-20	Autocollimator		—"—
24	08-10-20	Tool maker microscope		—"—
25	19-10-20	Profile Projector		—"—
26	20-10-20	C.m.m & it's application		—"—

Execution Plan

Name of Faculty:- A. S. Sakkore   Semester: V   Section: A/B/C   **B**

Subject Code: 0 5mf 02   Subject Name: Production Tech.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	22-10-20	Unit IV std. of measurment	✓	on line class
28	28-10-20	Line, End & wavelength std.	✓	-11-
29	29-10-20	Limit, fits & Gauges.	✓	-11-
30	02-11-20	Allowance & fit types	✓	-11-
31	03-11-20	Interchangeability, Tolerance	✓	-11-
32	10-11-20	Problems	✓	-11-
33	11-11-20	Problems	✓	-11-
34	17-11-20	Unit-II concept of Universe	✓	-11-
35	18-11-20	N-D curve	✓	-11-
36	23-11-20	Control chart for variable	✓	-11-
37	24-11-20	Control chart for attribute	✓	-11-
38	25-11-20	Process capability	✓	-11-
39	01-12-20	Comp. beth variable & attribute	✓	-11-
40	07-12-20	O.C Curve	✓	-11-
41	08-12-20	Problems	✓	-11-
42	14-12-20	Problems	✓	-11-
43	16-12-20	Problems	✓	-11-
44	17-12-20	Unit - III Intro. to work study	✓	-11-
45	21-12-20	method study	✓	-11-
46	22-12-20	Process Chart--	✓	-11-
47	23-12-20	Motion economy study	✓	-11-
48	28-12-20	multiple activity chart, simo chart	✓	-11-
49	29-12-20	Two handed process chard	✓	-11-
50	30-12-20	Work measurement	✓	-11-
51	04-01-21	P.M.TS	✓	-11-
52	05-01-21	Time estimation	✓	-11-

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:- A. U. AWATE   Semester V   Section (A)/B/C   A

Subject Code: _____   Subject Name: Metrology & Quality Control

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	23/8/21	Importance of quality in prod. & Services.	✶	↑
2	24/8/21	Quality Control & Statistical Quality Control	✶	
3	25/8/21	Quality Assurance, Quality Charecteristics	✶	
4	6/9/21	Value & cost of Quality.	✶	
5	7/9/21	TQM	✶	
6	8/9/21	SQC, Basic concepts of SQC	✶	
7	9/9/21	Variable & Attribute data	✶	
8	13/9/21	Shewart Control Charts	✶	
9	14/9/21	Process Capability	✶	
10	15/9/21	Problems on SQC	✶	
11	16/9/21	Problems on SQC.	✶	
12	20/9/21	Quality Circle.	✶	
13	21/9/21	Standards of measurement	✶	On-line Classes
14	22/9/21	System of limits & fits	✶	
15	23/9/21	Types of tolerences	✶	
16	4/10/21	Interchangeubility & Selective Assembly	✶	
17	5/10/21	Shaft & Hole basis Systems	✶	
18	6/10/21	IS : 919	✶	
19	11/10/21	Limit Gauging.	✶	
20	12/10/21	Types of limit gauges.	✶	
21	13/10/21	Mechanical & Pneumatic Comparators	✶	
22	18/10/21	Optical & Electrical comparators	✶	
23	20/10/21	Gear measurement	✶	
24	25/10/21	Screw Thread Measurement	✶	
25	26/10/21	Surface Texture Measurement	✶	
26	27/10/21	Geometric Features Measurement	✶	↓

(P.T.O.)

Odd/Even Semester 2021-22)

Execution Plan

Name of Faculty:-_____ Semester_____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	8/11/21	Advance Inspection Facilities, CMM	✶	
28	9/11/21	Profile Projector , Autocollimator	✶	
29	10/11/21	Tool Maker's Microscope.	✶	
30	11/11/21	Non Destructive testing.	✶	

Teaching Plan

Subject Code: _____

Subject Name: <u>Metology of Q.C.</u>

Lecture	Topic	Date	Unit
1	Importance of quality in Prod. & Services	23/8/21	I
2	Q.C. & SQC	24/8/21	I
3	Quality Assurance, Quality Characteristics	25/8/21	I
4	Value & Cost of Quality	6/9/21	I
5	TQM	7/9/21	I
6	SQC, Basic Concepts of SQC	8/9/21	I
7	Variable & Attribute data	9/9/21	II
8	Shewart Control Charts	13/9/21	II
9	Process Capability	14/9/21	II
10	Problems of SQC	15/9/21	II
11	" " "	16/9/21	II
12	Quality Circle.	20/9/21	II
13	Standards of Measurement	21/9/21	IV
14	System of Limits, Fits	22/9/21	IV
15	Types of Tolerances	23/9/21	IV
16	Interchangeability, Selective Assly	4/10/21	IV
17	Shaft & Hole System	5/10/21	IV
18	IS: 919	6/10/21	IV
19	Limit Gauging	11/10/21	IV
20	Types of limit gauges	12/10/21	IV
21	Mechanical & Pneumatic Comparators	13/10/21	V
22	Optical & Electrical Comparators	18/10/21	V
23	Gear Measurement	20/10/21	V
24	Screw Thread Measurement	25/10/21	V
25	Surface Texture Measurement	26/10/21	V
26	Geometric Features " .	27/10/21	V
27	CMM	8/11/21	VI
28	Bfile Projector, Autocollimator	9/11/21	VI
29	Tool Maker's Microscope	10/11/21	VI
30	Non Destructive Testing	11/11/21	III
31	Non Destructive Testing	12/11/21	III
32	Non Destructive Testing	13/11/21	III

Name of Subject Teacher
(A. U. Awate)

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. U. Awate,   Semester VIII   Section: A/B/C   A

Subject Code: _____   Subject Name: ORT

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21/1/21	Introduction to OR		
2	22/1/21	Models in OR		
3	23/1/21	Formulation of LPP		
4	27/1/21	Duel in LPP		
5	28/1/21	Graphical method		
6	29/1/21	Graphical Method Prob.		
7	30/1/21	Simplex method		
8	3/2/21	Simplex method		
9	4/2/21	Applications of LPP		
10	5/2/21	Transportation Algorithm		
11	6/2/21	Methods to get initial solution		
12	10/2/21	" " " " "		
13	11/2/21	" " " " "		
14	12/2/21	MODI Method		
15	13/2/21	Degeneracy in Transp. Prob.		
16	17/2/21	Unbalanced Prob.		
17	18/2/21	Assignment Model		
18	20/2/21	Unbalanced Case		
19	24/2/21	Hangarian method		
20	25/2/21	Hangarian Method		
21	26/2/21	Problems		

On-Line classes

(P.T.O.)

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- _____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
22	10/3/21	Introduction to PERT & CPM	✗	
23	12/3/21	Diff. bet^n PERT & CPM	✗	
24	13/3/21	Network diagram	✗	
25	15/4/21	Forward & backward pass method	✗	
26	16/4/21	Floats	✗	
27	17/4/21	Problem on floats	✗	
28	22/4/21	Critical path method	✗	
29	23/4/21	3 Time estimation prob.	✗	
30	30/4/21	Project Crashing Rob.	✗	
31	5/5/21	Sequencing Model	✗	
32	6/5/21	Sequencing Model	✗	
33	7/5/21	Johonson's Rule	✗	
34	8/5/21	Sequencing n jobs thru m m/c	✗	
35	12/5/21	Simulation	✗	
36	13/5/21	Montel carlo Tech.	✗	
37	15/5/21	Simulation of waiting line prob.	✗	
38	19/5/21	Simulation problem	✗	
39	20/5/21	waiting line model	✗	
40	21/5/21	Waiting line model	✗	
41	22/5/21	Dynamic Programing	✗	
42	27/5/21	Cargo loading prob.	✗	
43	2/6/21	Salesman Problem	✗	
44	3/6/21	Problem on dynamic programing	✗	
45	4/6/21	Problem on graphical method	✗	
46	5/6/21	Problem on LPP formulation	✗	
47	13/6/21	" " " " .	✗	

On-line classes

Teaching Plan

Subject Code: _____   Subject Name: __ORT__

Lecture	Topic	Date	Unit
1	Introduction to OR	21/1/21	I
2	Models in OR	22/1/21	I
3	Formulation of LPP	23/1/21	I
4	Graphical method	27/1/21	I
5	Graphical method Problems.	28/1/21	I
6	Simplex method	29/1/21	I
7	Simplex method	30/1/21	I
8	Applications 4 LPP	3/2/21	I
9	Transportation Algorithm	4/2/21	II
10	Methods to get Initial sol^n.	5/2/21	II
11	" " " " "	6/2/21	II
12	" " " " "	10/2/21	II
13	MODI method	11/2/21	II
14	Degeneracy in Tran. Prob.	12/2/21	II
15	Unbalanced Case	13/2/21	II
16	Assignment model	17/2/21	II
17	Unbalance Case	18/2/21	II
18	Hungarian method	20/2/21	II
19	Hungarian method	24/2/21	II
20	Problems	25/2/21	II
21	Introduction to PERT & CPM	26/2/21	III
22	Diff. bet^n PERT & CPM	10/3/21	III
23	Network dij.	12/3/21	III
24	Forward/ Backward Pan Method	13/3/21	III
25	Floats	15/4/21	III
26	Problems on Floats	16/4/21	III
27	Critical Path Method	17/4/21	III
28	3 Estimation Prob.	22/4/21	III
29	Project Crashing Prob.	23/4/21	III
30	Sequencing model	30/4/21	IV
31	Sequencing model	5/5/21	IV
32	Johansson Rule	6/5/21	IV
33	Sequencing n jobs thru m m/c.	7/5/21	IV

Name of Subject Teacher

(p. T. 0.)

Name of Subject Teacher

Teaching Plan

Subject Code: _____

Subject Name: _____

Date Lecture	Topic	Lecture Date	Unit
8/5/21	Simulation.	34	V
12/5/21	Monte - Carte Simulation	35	V
13/5/21	Simulation of Waiting line Prob.	36	V
15/5/21	Simulation Prob.	37	V
19/5/21	Waiting line model	38	V
20/5/21	Waiting line Prob.	39	V
21/5/21	Dynamic Programming	40	VI
22/5/21	Cargo loading problem	41	VI
27/5/21	Salesman Problem	42	VI
2/6/21	Prob on dynamic prog.	43	VI
3/6/21	Prob on LPP Formulation	44	VI
4/6/21	,, ,, ,, ,,	45	VI

Name of Subject Teacher

A. U. Awale

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester ~~2021-22~~) 2020 – 21

Execution Plan

Name of Faculty:- A. U. Awate   Semester V   Section: (A)/B/C | A |

Subject Code: _____   Subject Name: P.T.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	12/10/20	Def^n, Importance & Scope of quality	✗	
2	13/10/20	Diff. bet^n Insp & Q.C.	✗	
3	14/10/20	Quality Characteristics, Quality Assurance	✗	
4	15/10/20	Value & Cost of quality	✗	
5	19/10/20	TQM	✗	
6	20/10/20	SQC, Basic Concepts of SQC	✗	
7	21/10/20	Variable & Attribute Data	✗	
8	22/10/20	Shewart Control Charts	✗	
9	26/10/20	Process Capability.	✗	
10	27/10/20	Problems on SQC	✗	
11	28/10/20	Introduction to W.S.	✗	
12	29/10/20	Steps in method study.	✗	
13	2/11/20	Various recording tech.	✗	
14	3/11/20	Workplace layout	✗	
15	4/11/20	examples on Charts & diagrams	✗	
16	5/11/20	Time Study techniques	✗	
17	23/11/20	Standard time problems	✗	
18	24/11/20	system of limits, fits & tolerence	✗	
19	25/11/20	Terminology	✗	
20	26/11/20	Terminology	✗	
21	1/12/20	Gauging Practice & Gauge design	✗	
22	2/12/20	Standards of measurement	✗	
23	3/12/20	Comparators	✗	
24	4/12/20	Comparators	✗	
25	8/12/20	Linear Measurement	✗	
26	9/12/20	Flatness, Squareness Testing.	✗	W-20

ON-LINE classes

(P.T.O.)

Execution Plan

Name of Faculty:- _____ Semester____ Section: A/B/C
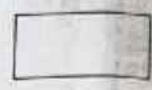
Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	10/12/20	Gear Measurement	✗	↑
28	11/12/20	Screw Thread Measurement	✗	
29	14/12/20	Surface Texture Measurement	✗	On-line class →
30	15/12/20	Tool maker's Microscope	✗	
31	16/12/20	Profile Projector	✗	
32	21/12/20	Autocollimator	✗	
33	22/12/20	CMM	✗	
34	23/12/20	Interferometry	✗	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

Teaching Plan

Subject Name: __P.J.__

Lecture	Topic	Date	Unit
1	Def^n, Importance & Scope of Quality	12/10/20	I
2	Diff. beth QIP. & QC	13/10/20	I
3	Quality Characteristics, Q. Assurance	14/10/20	I
4	Value & cost of Quality	15/10/20	I
5	TQM	19/10/20	I
6	SQC Basic concepts	20/10/20	II
7	Variable & Attribute Data	21/10/20	II
8	Shewart control chart	22/10/20	II
9	Process Capability	26/10/20	II
10	Problem in SQC	27/10/20	II
11	Introduction to W.S.	28/10/20	III
12	Steps in Method study	29/10/20	III
13 3	Recording tech.	2/11/20	III
14	Workplace layout	3/11/20	III
15	~~contro~~ Charts & diagrams	4/11/20	III
16	Time study	5/11/20	III
17	Stand. time	23/11/20	III
18	Limit, fiti, tolerence	24/11/20	IV
19	Terminology	25/11/20	IV
20	Terminology	26/11/20	IV
21	Gauging practice & Gauge design	1/12/20	IV
22	Standards of Measurement	2/12/20	IV
23	Comparators	3/12/20	V
24	Comparators	4/12/20	V
25	Linear Measurement	8/12/20	V
26	Flatness, Squareness Testing	9/12/20	V
27	Gear Measurement	10/12/20	V
28	Screw Thread Measurement	11/12/20	VI
29	Surface Texture Meast	14/12/20	VI
30	Tool maker's Microscope	15/12/20	VI
31	Profile Projector	16/12/20	VI
32	Autocollimater	21/12/20	VI

Name of Subject Teacher

(P·T·O·)

Prof. Ram Meghe Institute of Technology and Research, Badnera
Department of Mechanical Engineering
TEACHING PLAN

Name of Faculty: **A. V. Deshmukh**   Section: A

Subject: **Automation Engineering** Semester: **VII**   Subject Code: **7ME04**

Lecture No.	Unit	Topic Covered	Remark
1	I	Introduction to Automation &Types	
2		Aucomation for mass manufacturing and assembly	
3		Automation of continuous processing systems	
4		Detroit type automation, Automated flow lines.	
5		Methods of work part transport, transfer mechanisms, control function .	
6		General terminology and anaylsis of automated flow line	
7		Partial automation, assembly, systems	
8		Line balancing.	
9	II	NC/CNC :- Basic concept	
10		N.C. controls- point to point , straightcut and continuous path control	
11		Machine control units, closed system, NC machine components, tooling, CNC & DNCs	
12		Manual part programming formats	
13		Programming languages- APT,ADAPT, EXAPT etc. NC/CNC Programming- Various Programming codes	
14		Manual part programming for drilling, Milling and turning operations	
15		Examples of APT, Sensors and adaptive control in machining	
16		Applications and economics of CNC.	
17	III	ROBOTICS :- Introduction to cybernetics	
18		Evolution of industrial robots	
19		Robots anatomy	
20		Arm geometry, drive system	
21		End efforts, sensors	
22		Evolution of geometrical configurations for	
23		Robots Programming techniques of Robots.	
24		Applicaion of Robots in manufacturing, casting, welding, painting,	
25		Applicaion of Robots in m/c loading, handling, heat treatment, assemly, inspection, etc	
26		Technicql Specifications of a Robot, Robot economics.	
27	IV	Introduction-Part families.	
28		part classification and coding systems	
29		Group technology machine cells	
30		advantage of group technology	
31		The planning function of process planning system	
32		retrieval type process planning system,	
33		Generative process planning systems	
34		Benefits of CAPP, Expert systems and	
35		expert system approach to CAPP	
36	V	FMS : Introduction.	
37		schematic of FMS, FMs cells	
38		Componenets of FMS	

39		Relation of Group Technology, with FMS, and Planning of FMS	
40		Relation of Group Technology, with Simulation and analysis of FMS	
41		Applications of FMS.	
42		Material handling : Automated storage System	
43		Material handling : Automated Retrieval system	
44		Automated Guided Vehicle (AGV)etc.	
45		Introduction Computer Integrated Manufacturing .	
46		Sequence of functins in CIM	
47		Elements of CIM system	
48		CIM Wheel, structure of CIM database system.	
49		Guidelines for CIM development, benefits of CIM	
50	VI	Shop floor control and process monitoring	
51		Automated inspection and testing introduction	
52		Introduction to automated inspection, Advantages over traditional method.	
53		On-line & offline inspection	
54		CMM construction	
55		CMM types & working.	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. V. Deshmukh   Semester 7th   Section: A/B/C   A

Subject Code: 7ME04   Subject Name: Automation Engineering

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11-8-20	Unit 1 :-> Intro to Automation & Types		
2	12-8-20	Automation for mass manuf. & Assembly		
3	13-8-20	Automation of contenious Process system		
4	18-8-20	Detroit type automation, flow lines.		
5	20-8-20	Method of work part transport.		
6	24-8-20	General analysis of automated flowline		
7	26-8-20	Partial automation assembly system		
8	27-8-20	Line balancing.		
9	31-8-20	Unit 2 :-> NC & CNC Concept.		
10	1-9-20	NC Controls PTP, ST & Cont Path		Online
11	2-9-20	MCU, CS, NC component tools. DNC		
12	7-9-20	Manual part programming		Lecture
13	8-9-20	Prog. langauges :- APT, EXPT & Code		
14	9-9-20	Program for drilling, Milling & Turning		
15	10-9-20	sensor & adaptive Control in m/c.		
16	14-9-20	Application & economics of CNC.		
17	15-9-20	Unit III :-> Robotics & Intro		
18	16-9-20	Evolution of Industries robots.		
19	17-9-20	Robot Anatomy.		
20	21-9-20	Arm geometry, drive system		
21	24-9-20	End effector, sensors.		
22	28-9-20	Evolution of geometrical config.		
23	29-9-20	Robot programming techniques.		
24	30-9-20	Application of Robot Casting, painting		
25	1-10-20	Application of MT, assembly, inspection		
26	5-10-20	Technical specification of Robot.		

Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. V. Deshmukh Semester 7th Section: A/B/C A

Subject Code: 7ME04   Subject Name: Automation Engineering

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	6 -10-20	Unit 4:-> Intro to Part family		
28	7 -10-20	Part classification & Coding System		
29	8 -10-20	Group technology machine cell.		
30	19-10-20	Advantage of G.T.		
31	21-10-20	The planing of CAPP.		
32	26-10-20	Retrival type CAPP		
33	27-10-20	Generative type CAPP		
34	28-10-20	Benefits of CAPP		
35	29-10-20	Expert system & Approch to CAPP.		Sign of
36	2- 11-20	Unit 5:-> FMS Introduction		Online
37	3-11-20	schematic of FMS & FMS Cell.		
38	4-11-20	Component of FMS.		Lecture
39	5-11-20	Relation of GT with FMS.		
40	9-11-20	Relation of GT with simulation		
41	10-11-20	Application of FMS.		
42	11 -11-20	Material handling of AS system		
43	12 -11-20	Material handing of RS system		
44	23-11-20	AGV system.		
45	24-11-20	Unit 6:-> Intro to CIM		
46	26-11-20	sequence function in CIM.		
47	1-12-20	Element of CIM		
48	7-12-20	CIM wheel, CIM Database.		
49	8-12-20	Guidelines of CIM + Benefits.		
50	9-12-20	Auto Inspection & testing.		
51	10-12-20	SPC & Process monetoring.		
52	14-12-20	Advantages over Methods		
53	15-12-20	online & offline inspection.		
54	18-12-20	CIM & CMM construction.		
55.	17-12-20	CMM Types & working.		

Deptt of Mechanical
PRMIT &R Badnera

Prof. Ram Meghe Institute of Technology and Research, Badnera
Department of Mechanical Engineering
TEACHING PLAN

Name of Faculty: **A. V. Deshmukh**   Section: C

Subject: **Automation Engineering**   Semester: **VII**   Subject Code: 7 ME 04

7ME04

Lecture No.	Unit	Topic Covered	Remark
1	I	Introduction to Automation &Types	
2		Automation for mass manufacturing and assembly	
3		Automation of continuous processing systems	
4		Detroit type automation, Automated flow lines.	
5		Methods of work part transport, transfer mechanisms, control function .	
6		General terminology and anaylsis of automated flow line	
7		Partial automation, assembly, systems	
8		Line balancing.	
9	II	NC/CNC :- Basic concept	
10		N.C. controls- point to point , straightcut and continuous path control	
11		Machine control units, closed system, NC machine components, tooling, CNC & DNCs	
12		Manual part programming formats	
13		Programming languages- APT,ADAPT, EXAPT etc. NC/CNC Programming- Various Programming codes	
14		Manual part programming for drilling, Milling and turning operations	
15		Examples of APT, Sensors and adaptive control in machining	
16		Applications and economics of CNC.	
17	III	ROBOTICS :- Introduction to cybernetics	
18		Evolution of industrial robots	
19		Robots anatomy	
20		Arm geometry, drive system	
21		End efforts, sensors	
22		Evolution of geometrical configurations.	
23		Robots Programming techniques of Robots.	
24		Applicaion of Robots in manufacturing, casting, welding, painting,	
25		Applicaion of Robots in m/c loading, handling, heat treatment, assemly, inspection, etc	
26		Technicql Specifications of a Robot, Robot economics.	
27	IV	Introduction-Part families.	
28		part classification and coding systems	
29		Group technology machine cells	
30		advantage of group technology	
31		The planning function of process planning system	
32		retrieval type process planning system,	
33		Generative process planning systems	
34		Benefits of CAPP, Expert systems and	
35		expert system approach to CAPP	
36	V	FMS : Introduction.	
37		schematic of FMS, FMs cells	

38		Componenets of FMS
39		Relation of Group Technology, with FMS, and Planning of FMS
40		Relation of Group Technology, with Simulation and analysis of FMS
41		Applications of FMS.
42		Material handling : Automated storage System
43		Material handling : Automated Retrieval system
44		Automated Guided Vehicle (AGV)etc.
45		Introduction Computer Integrated Manufacturing .
46		Sequence of functins in CIM
47		Elements of CIM system
48		CIM Wheel, structure of CIM database system.
49		Guidelines for CIM development, benefits of CIM
50	VI	Shop floor control and process monitoring
51		Automated inspection and testing introduction
52		Introduction to automated inspection, Advantages over traditional method.
53		On-line & offline inspection
54		CMM construction
55		CMM types & working.

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. V. Deshmukh Semester 7th   Section: A/B/C   C

Subject Code: 7ME04   Subject Name: Automation Engineering

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11-8-20	Unit 1 :→ Intro to Automation & Types	dev	
2	12-8-20	Automation for mass manuf. & assembly	dev	
3	13-8-20	Automation of contenious Processing Systm	dev	
4	18-8-20	Detroit type Automation, flow lines	dev	
5	20-8-20	Method of workpart transport.	dev	
6	24-8-20	General analysis of automated Flowline	dev	
7	26-8-20	Partial automation assembly system	dev	
8	27-8-20	Line balancing.	dev	
9	31-8-20	Unit 2 :→ NC & CNC concept.	dev	
10	1-9-20	NC Controls PTP, ST & Cont Pt.	dev	
11	2-9-20	MCU, CS, NC component tools, DNC	dev	Online
12	7-9-20	Manual Part programming.	dev	
13	8-9-20	Prog. langauges :- APT, EXAPT & codes	dev	Lecture
14	9-9-20	Program for drilling, Milling & Turning.	dev	
15	10-9-20	Sensors & adaptive Control in m/c	dev	
16	14-9-20	Application & economics of CNC.	dev	
17	15-9-20	Unit III :→ Robotics & Intro.	dev	
18	16-9-20	Evalution of Industrial robots.	dev	
19	17-9-20	Robot Anatomy.	dev	
20	21-9-20	Arm geometry, drive System.	dev	
21	24-9-20	End effector, sensors.	dev	
22	28-9-20	Evolution of geometrical config.	dev	
23	29-9-20	Robot programming techniques.	dev	
24	30-9-20	Application of Robot casting, painting	dev	
25	1-10-20	Appln of HT, assembly, inspection.	dev	
26	5-10-20	Technical specification of Robot.	dev	

Name of Faculty:- A V Deshmukh Semester 7th   Section: A/B/C   C

Subject Code: 7ME04   Subject Name: Automation Engineering

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	6-10-20	Unit4:-> Intro to part family		
28	7-10-20	Part classification f Coding System		
29	8-10-20	Group technology machine cell		
30	19-10-20	Advantage of group technology.		
31	21-10-20	The planning fun of process plan.		
32	26-10-20	Retrival type CAPP		
33	27-10-20	Generative type CAPP.		●
34	28-10-20	Benefits of CAPP, Expert System.		
35	29-10-20	Ex. System approch to CAPP.		
36	2-11-20	Unit5:-> FMS Introduction.		
37	3-11-20	schematic of FMS. f FMS Cell.		online
38	4-11-20	Componant of MFS.		
39	5-11-20	Relation of GT with FMS		
40	9-11-20	Relation of GT with Simulation		Lecture
41	10-11-20	Application of FMS.		
42	11-11-20	Material handling AS system		
43	12-11-20	material handling RS system.		
44	23-11-20	AGV system.		●
45	24-11-20	Unit6:-> Intro to CIM.		
46	26-11-20	Sequence of function in CIM		
47	1-12-20	Element of CIM		
48	7-12-20	CIM Wheel, CIM Database		
49	8-12-20	Guidlines for CIM, benifits		
50	9-12-20	SFC f Process monetoring.		
51	10-12-20	Auto Inspection f Testing.		
52	14-12-20	Advantages over traditional Method.		
53	15-12-20	online f off line Inspection.		
54	16-12-20	CIM f CMM Construction.		
55	17-12-20	CMM Types f working		

Deptt of Mechanical Engineering
DR MIT & R Badnera

Prof. Ram Meghe Institute of Technology and Research, Badnera
Department of Mechanical Engineering
TEACHING PLAN

Name of Faculty: **A. V. Deshmukh** Section: **B**

Subject: **Energy Conversion-I**   Semester: IV   Subject Code: **4ME02**

Lecture No.	Unit	Topic Covered	Remark
1	I	Flow diagram for steam power plant with basic units such as steam	
2		Steam power plant layout, site selection.	
3		Boilers: Introduction to water tube used in thermal power plants	
4		Boilers: fire tube boilers used in thermal power plants	
5		Packaged Boilers, High pressure boilers; Loeffler,	
6		Benson, Lamont Boilers, Boiler mountings	
7		Accessories—devices for improving Boiler efficiency. Principle of fluidized bed combustion. Concept of co-generation.	
8	II	Boiler draught; Types of draught	
9		Expression for diameter & height of chimney, condition for maximum discharge	
10		Efficiency of chimney, reasons for draught loss.	
11		Boiler performance:- Boiler rating, boiler power	
12		Boiler performance:- equivalent evaporation, efficiency	
13		Effect of accessories on boiler efficiency	
14		Effect of accessories on heat balance.	
15	III	Need, Types of condensers, quantity of cooling water required.	
16		Dalton's law of partial pressure, condenser and vacuum efficiency.	
17		Sources of air in condensers and its effect on performance. cooling	
18		Towers: Natural and mechanical wet type cooling tower.	
19		Steam nozzles : Flow of steam through nozzles & diffusers, Maximum discharge, critical pressure ratio.	
20		Chocking in nozzles, Effect of friction. Determination of throat & exit areas	
21		Nozzle efficiency, concept of super saturated flow & Wilson line.	
22	IV	Steam Turbines:- Principle of working	
23		Types of steam turbines such as impulse, reaction	
24		Types of steam turbines axial & radial flow, back pressure & condensing turbines.	
25		Compounding. Reheat, regenerative cycles, bleeding. Analysis limited to two stages only	
26		Analysis of steam Turbines : Flow of steam through impulse	
27		Impulse reaction turbine blades, Velocity diagrams.	
28		Graphical & analytical methods for work & power developed, axial thrust and efficiency. Height of turbine blades.	
29		Losses in steam turbines:- blade friction, partial admission, disc friction, gland leakage losses and velocity losses. Governing of steam turbines.	
30	V	NUCLEAR POWER:- Fusion, fission,	
31		Chain reaction	
32		Conversion and breeding in nuclear fission.	
34		Components of Nuclear Power Plant	

35		Reactor, Steam generator	
36		Turbine, Moderator, Control Rods	
37		Types of nuclear reactors like BWR, PWR, CANDU	
38		Types of nuclear reactors liquidized metal cooled thermal reactors.	
39		Introduction to renewable energy, Wind Energy, solar.	
40		Fuel cell, bio-gas power plants	
41		MHD power plants	
43	VI	Geothermal power plants	
44		OTEC power plants	
45		Tidal power plants	
46		Applications of Non conventional energy.	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. V. Deshmukh Semester 4th   Section: A/B/C   B

Subject Code: 4ME02   Subject Name: EC-I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18-1-21	Unit 1:→ Flow diagram for P.P.		
2	19-1-21	steam P.P Layout & site selection		
3	20-1-21	Boiler:- W.T & F.T in thermal P.P.		
4	21-1-21	Boiler:- High Pr Boiler Loffler		
5	25-1-21	Benson, Lamont boiler		
6	27-1-21	Assessories & Mounting		
7	28-1-21	Boiler efficiency		Online
8	1-2-21	Fluidised Bed contraction		Lectures
9	2-2-21	Concept of Co-generation		
10	3-2-21	Unit 2:→ Boiler draught		
11	4-2-21	Exp^n of dia + height of chimney		
12	8-2-21	efficiency of chimney		
13	9-2-21	Boiler performace Rating & Power		
14	10-2-21	equvalant evaporation & η		
15	11-2-21	Numerical on chimney		
16	15-2-21	Numericals on Draught		
17	16-2-21	Effect of accessories on boiler		
18	17-2-21	heat balance sheet		
19	18-2-21	Unit 3:→ Need & types of cond^r		
20	22-2-21	Dalton's law of Partial Pressure		
21	23-2-21	Source of air in condenser		
22	24-2-21	Tower & it's type		
23	25-2-21	steam Nozzle & Diffuser		
24	1-3-21	chocking in nozzle, friction		
25	2-3-21	Nozzle η, wilson line		
26	3-3-21	Numericals on nozzle		

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

Execution Plan

Name of Faculty:- A. V. Deshmukh Semester 4ᵗʰ   Section: A/B/C   B

Subject Code: 4ME08   Subject Name: EC-I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	4-3-21	Numerical on Nozzle η.	dev	
28	8-3-21	Unit4:→ steam Turbine Principle.	dev	
29	9-3-21	Types of ST. impulse turbine	dev	
30	10-3-21	axial, radial turbine, reaction	dev	
31	12-4-21	Compounding of steam turbine	dev	
32	15-4-21	velocity diagram of S.T.	dev	
33	19-4-21	Hight of turbine blade. axial thrust	dev	
34	20-4-21	Numerical of steam turbine.	dev	
35	22-4-21	Losses in steam turbine.	dev	
36	24-4-21	Unit5:→ Nuclear Power fusion	dev	
37	3-5-21	Fussion, chain reaction.	dev	
38	4-5-21	conversion + breeding in N.f.	dev	Online
39	6-5-21	nuclear Power Plant component	dev	
40	10-5-21	Reactor, + steam generator.	dev	Lectures
41	11-5-21	Turbine moderator, Control Rod.	dev	
42	12-5-21	Types of reactor BWR, PWR.	dev	
43	13-5-21	CANDU, Liquidfied Metal Cooled react.	dev	
44	17-5-21	Numericals of chain reaction.	dev	
45	18-5-21	Unit6:→ Intro to renewable enegy	dev	
44	19-5-21	fuel cell, Biogas plant.	dev	
47	20-5-21	MHD Cell P.P.	dev	
48	24-5-21	Geothermal Power plant.	dev	
49	25-5-21	Solar energy.	dev	
50	27-5-21	Ochan thermal Power plant.	dev	
51	1-6-21	Tidal power plant.	dev	
52	2-6-21	Application of Non Conventional	dev	
53				
54	•			

Teaching Plan 2020-21

Subject Code: 6ME01   **Subject Name: Fluid Powe. -II**

Lecture	Topic		Date
1	Introduction to Prime Movers		
2	Theory of impulse and reaction machines.	UNIT- I	
3	Pelton, Francis and Kaplan turbines		
4	Analysis, characteristics and governing turbines		
5	draft tube, unit quantities.		
6	Numerical on Turbine		
7	Numerical on Turbine		
8	Introductions to Centrifugal pumps		
9	Basic Theory, classification, construction,	UNIT- II	
10	Characteristics of Centrifugal Pump		
11	Multistage of C.P		
12	NPSH and cavitations in pumps		
13	Numericals on Centrifugal Pump		
14	Numericals on Centrifugal Pump		
15	Introduction to Axial flow pump		
16	Basic theory, construction, operation, and characteristics of axial pump		
17	water lifting devices		
18	Air lift pump.		
19	Jet Pump	UNIT- III	
20	Hydraulic Ram.		
21	Introduction to Computational Fluid Dynamics (CFD): Basic Definition		
22	Applications of CFD in the area of research & Industry		
23	Comparison of Experimental Fluid Dynamics and Computational Fluid Dynamics		
24	Importance of Governing Equations and the physical meaning of the involved terms		
25	Positive displacement Pumps		
26	Reciprocating Pumps :- Basic theory, types,		
27	construction, installation and characteristics		
28	Rotary Pumps :- Basic theory	UNIT- IV	
29	types, construction of rotary pump		
30	Variable delivery pumps.		
31	Numericals on rotary pump		
32	Compressible fluid flow		
33	Perfect gas relationship		
34	Numericals on Compressible fluid flow		
35	Numericals on Compressible fluid flow	UNIT- V	
36	speed of sound wave, mach number		
37	Isothermal and isotropic flows		
38	shock waves		

39	Rayliegh lines		
40	Hydrostatic systems		
41	Hydrostatic systems & their function		
42	Components of Hydraulic system		
43	application of fluid drive for machine tools	UNIT - VI	
44	application of fluid drive for machine tools		
45	Intensifier and accumulator		
46	Hydrokinetic systems		
47	Fluid couplings and		
48	Torque converter.		

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A. V. leader   Semester even   Section: A/B/C   **B**

Subject Code: 6MEO1   Subject Name: FP II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19-1-21	Turbine, it's classification		online
2	20-1-21	pelton wheel, properties		online
3	23-1-21	Hydraulic machine, numericals		online
4	27-1-21	turbine, its ifficiency		online
5	28-1-21	— '' —		online
6	30-1-21	velocity Dig. of pelton wheel		online
7	3-2-21	numericals		online
8	4-2-21	Draft tubes		online
9	5-2-21	characteristic curves		online
10	9-2-21	centrifugal pump		online
11	12-2-21	parts of centrifugal pump		online
12	13-2-21	workdone by centrifugal pump		online
13	16-2-21	efficiences of centrifugal pump		online
14	18-2-21	priming, cavitation		online
15	23-2-21	suction head, Discharge head		online
16	24-2-21	impellers		online
17	26-2-21	Vane pump, piston pump		online
18	27-2-21	gear pump,		online
19	9-3-21	Airlift pump		online
20	10-3-21	RAM pump		online
21	12-3-21	intro to CFD		online
22	13-3-21	numericals		online
23	15-4-21	Governing equation		online
24	16-4-21	pumping system it's types		online
25	20-4-21	Reciprocating pump		online
26	21-4-21	Discharge through reciprocating pump		online

Execution Plan

Name of Faculty:- A.V.kadu Semester even Section: A/B/C B

Subject Code: _____ Subject Name: F P II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	23-4-21	indicator diagram		online
28	27-4-21	Air vessels		online
29	29-4-21	Rotary pump		online
30	30-4-21	velocity of sound		online
31	5-5-21	convession of mach no.		online
32	7-5-21	isothermal & isotrofic flows		online
33	11-5-21	shock waves		online
34	13-5-21	Raylieigh lines.		online
35	15-5-21	pascals law, types of F.P. systems		online
36	26-5-21	Hydraulic press		online
37	25-5-21	Hydraulic Ram pump		online
38	27-5-21	Hydraulic lift		online
39	28-5-21	Hydraulic intensifier		online
40	9-6-21	couplings		online
41	10-6-21	Torque converter.		online
42	11-6-21	pascals law		online
43	12-6-21	Hydraulic couplings.		online

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Teaching Plan

Sub – 3ME02 MANUFACTURING PROCESSES

Lecture No.	Topic
Unit 1	
1	Introduction to manufacturing processes & classification
2	Introduction to pattern making, Pattern material
3	pattern making tools, allowances, Types of patterns,
4	functions of patterns, General properties of moulding sands, Mold hardness.
5	Preparation of sand moulds of different types, Moulding processes
6	core making, core prints, core boxes
7	Sand casting Processes
8	Basic principle and Terminology of sand casting
9	design of gating and riser system – by numerical approach.

Lecture No.	Topic
Unit 2	
1	Technology of melting and casting - Melting furnaces, crucibles
2	pit, open hearth, gas fired cupola
3	cupola operation and electric hearth furnaces
4	Electric furnaces - Direct Arc, Indirect arc and electric induction furnace
5	Defects in castings and its types, Causes and remedies of casting defects
6	Origin and classification of defects, shaping faults, inclusion and sand defects, Gas defects, shrinkage defects, contraction defects, dimensional errors
7	Inspection and testing of castings:- Radiography, ultrasonic, Eddy current testing, fluorescent penetrant test

Lecture No.	Topic
Unit 3	
1	Casting processes and their principle of operation and applications
2	permanent mold casting
3	slush casting, shell molding
4	Investment or lost wax casting, vacuum process,
5	centrifugal casting, continuous casting
6	Die casting equipment and processes for Gravity
7	pressure and vacuum casting methods, cleaning of castings
8	Modernisation & Mechanisation of Foundries

Lecture No.	Topic
Unit 4	
1	Mechanical working of metals
2	Principle of hot and cold working process and its types
3	Extrusion, piercing, pipe and tube production
4	manufacture of seamless pipe and tubing
5	Shearing operations, tube drawing, wire drawing
6	spinning, embossing and coining, squeezing and bending operations
7	rotary swaging, load estimation for bulk forming (forging and drawing)
8	rolling and types of rolling mills

Lecture No.	Topic
Unit 5	
1	Joining processes:- Mechanical joining processes
2	Mechanical fastening, riveting, soldering, brazing Welding
3	Types of welding processes-Arc welding: principle and working
4	Gas welding- principle and working Types and purpose of Electrodes
5	Electrode coatings(flux). TIG & MIG processes – Working principles and its applications
6	shielding gases, MIG-Spray transfer and dip transfer processes

Lecture No.	Topic
Unit 6	
1	Submerged arc welding
2	resistance welding :- Heat generation in resistance welding
3	operational characteristics of resistance welding processes such as spot welding
4	projection welding, butt welding
5	Principle of operation of friction welding, forge welding
6	plasma arc, thermit welding
7	Welding defects, Testing and Inspection of welds
8	Ultrasonic, Electroslag, Electron Beam, laser welding, weldability. Surface Treatment-Electroplating, electroforming
9	iodising, metal spraying, shot peening, polishing, mechanical cleaning

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A.V. kadu   Semester odd   Section: A/B/C   B

Subject Code: 3ME05   Subject Name: MP-I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	13-8-20	foundry		online
2	14-8-20	casting process		online
3	20-8-20	casting terms		online
4	27-8-20	pattern making		online
5	28-8-20	Types of allowance		online
6	29-8-20	Types of patterns		online
7	3-9-20	types of cores		online
8	5-9-20	parts of gating systems		online
9	10-9-20	Risening of castings		online
10	11-9-20	furnaces		online
11	18-9-20	various of types of furnaces		online
12	19-9-20	operation of furnace		online
13	24-9-20	electric furnace		online
14	25-9-20	indirect furnaces		online
15	3-10-20	cupola furnace operation		online
16	8-10-20	charging of cupola		online
17	9-10-20	cupola zones		online
18	15-10-20	surface defects		online
19	17-10-20	testing of casting		online
20	22-10-20	permanent mould		online
21	24-10-20	Hot chamber Die casting		online
22	31-10-20	cold chamber Die casting		online
23	5-11-20	shell moulding		online
24	7-11-20	centrifugal casting		online
25	12-11-20	semi-centrifugal casting		online
26	13-11-20	slush casting		online

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- A.V.kadu   Semester odd   Section: A/B/C   [B]

Subject Code: 3MEO5   Subject Name: MP-I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	19-11-20	principal of hot-cold working		online
28	21-11-20	piercing, pipe and tube		online
29	26-11-20	seamless pipe and tubing		online
30	28-11-20	tube drawing and spinning		online
31	3-12-20	joining processes		online
32	5-12-20	mech, fastening, riveting,		online
33	10-12-20	Types of welding.		online
34	12-12-20	TIG & MIG processes		online
35	18-12-20	submerged arc welding,		online
36	24-12-20	characteristics of welding process		online
37	26-12-20	principle of operation friction		online
38	1-1-21	thermit welding		online
39	2-1-21	welding defects.		online
40	7-1-21	laser welding		online
41	8-1-21	metal spraying @ shot peening		online
42	9-1-21	projection welding.		online

Dr. C. R. Patil

Teaching Plan

Online (2020-21) Section-A

Subject Code: 6ME04   Subject Name: Theory of Machine-II

Lecture	Topic	Date	Unit
1	Static equilibrium, superstition principle		UNIT I
2	**Static force analysis** applied to plane motion mechanisms		
3	Virtual work method		
4	Static force analysis without and with friction-problems		
5	Static force analysis without and with friction-problems		
6	Static force analysis without friction-problems		
7	Theory of hydrodynamic lubrication, boundary lubrication		
8	Film lubrication, rolling friction		
9	Performance of bearing		
10	D'Alemberts Principle. Engine force analysis-piston effort		UNIT- II
11	thrust along connecting rod, side of cylinder, on the bearings, crank effort and turning moment on the crank shaft.		
12	Dynamic equivalent system of connecting rod		
13	Inertia of the connecting rod. Inertia force in reciprocating engines (graphical method).		
14	**Turning moment diagrams** for two stroke		
15	four stroke and multi cylinder engines		
16	fluctuations of speed & energy,		
17	**Flywheel** requirements		
18	**Space mechanism:-** Gyroscope, gyroscopic effect as applied to ship ,Aeroplane		UNIT -III
19	gyroscopic effect as applied to 4 wheeler, 2 wheeler		
20	Universal joint.		
21	**Vehical dynamics:-** Coefficient of adhesion,		
22	resistance to vehicle motion		
23	relative drive effectiveness		
24	braking of vehicles		
25	Concept and basic terms of vibratory motions, types of vibrations		UNIT -IV
26	basic features or elements of vibrating systems, degree of reedom in mechanical vibratory system		
27	**Longitudinal vibrations-** Natural frequency free longitudinal vibrations by equilibrium, energy and Rayleigh method.		
28	Effect of inertia constraint in longitudinal vibrations		
29	Damped vibrations with mass, spring and dash pot. Definitions of logarithmic decrement, magnification factor, transmissibility, vibration isolation.		
30	**Whirling of shaft & critical speeds**		
31	Whirling of shaft & critical speeds-Problems		
32	**Problems**		

01/02

33	**Torsional vibration**, single rotor systems, Two Rotor system		
34	three rotor system		
35	geared systems		
36	Graphical method for multi rotor system.		
37	**Transverse vibrations**- natural frequency of free transverse vibrations. Effect of inertia constraints in transverse vibration		UNIT V
38	Natural frequency of free transverse vibrations due to point load and uniform distributed load acting over a simply supported shaft		
39	Frequency of free transverse vibrations of a shaft subject to a no. of point loads by energy and Dunkerley's method		
40	**Balancing of Machinery:**- Static, & dynamic unbalance		
41	balancing of rotating masses in same and different transverse planes		
42	Balancing of single cylinder, multi-cylinder V and radial engines		
43	Partial balancing of reciprocating masses		UNIT VI
44	Balancing of linkages & machine		
45	**Problems**		
46	**Problems**		
47	**Problems**		
48	**Problems**		
Total =			

02/02

(session from 18/1/21 to 13/6/2021)

~~Odd~~/Even Semester 2020-21) S-21 ✓

Execution Plan

Name of Faculty:- Dr. C.R. Patil   Semester 6ᵗʰ ✓ em ·Section: ~~A/B/C~~   **A**

Subject Code: 6ME04   Subject Name: Theory of Machine — II ✓

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	18-01-21	Static equilibrium & superposition principle	Cu	
02	19-01	Static force Analysis to 2D (SFA)	Cu	
03	20-01	Virtual work method.	Cuy	
04	21-01	SFA with friction problem	Cuy	
05	25	―ŋ― without ―ŋ―	Cuy	
—	(26-01-21)	Holiday (Republic day)	—	—
06	27	Theory of Hydrodynamic, boundary Lubri.	Cuy	
7	28	film lubrication, Rolling friction	Cuy	
8	01-2-21	performance of bearing	Cuy	
9	02	D'Alembertz principle	Cuy	HOD
10	03	thrust along CR, cylinder, bearings -	Cuy	
11	04	Dynamic eq. system of C.R.	Cuy	
12	8	Inertia of C.R.	Cuy	
13	9	T-θ. diag of 2-stroke engine, 4 stroke	Cuy	
14	10	Fluctuation of speed, energy	Cuy	
—	(11-2-21)	Holiday	—	
—	15-03-2021 to 11-04-2021 → online Exam W-20		Preparatio leave	
14	05-04-2021	Flywheel, reqd, problems	Cuy	
15	06-	space mechanism — Gyroscope, effec⌐	Cuy	
16	07	Gyroscopic couple of Aeroplane, ship.	Cuy	
17	08	―ŋ― 2 wheeler & 4 wheeler	Cuy	
18	12	―ŋ― problems	Cuy	
—	(13 & 14 April 2021 -)	Holiday	—	
19	15-04-2021	Gyroscopic couple problems	Cuy	
20	19	Vehicle dynamics — Coeft of Adhesion	Cuy	
21	20	resistance to vehicle motion	Cuy	
22	21	relative drive effectiveness	Cuy	
23	22	braking of Vehicles.	Cuy	

Unit - I (Sr. 01–09)
Unit - II (Sr. 10–14)
UNIT - III (Sr. 15–23)

'Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

ONLine
mode

(Odd/Even Semester 2020-21)   Dr. C.R.Patil

Execution Plan

Name of Faculty:- Dr. C.R.Patil _____ Semester_____   Section: A/B/C   A

Subject Code: _ 6ME04 _   Subject Name: _ ToM-II _

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
—	26/4/21 to 28/04/21 → CT-1 (schedule	—	—
24	29/4/21	concept & basic terms of vibratory motions	ay	
25	3-5-21	D.O.F. of mechanical vibration.	ay	
26	4	Longitudinal vibrahons, natural freq, T_L,	ay	
27	5	effect of inertia constraints in Longi.vibr.	ay	
28	6	Damped vibrations with mass, spring, dashpot,	ay	
29	10	whishing of sheft- & critical speeds.	ay	
30	11	whisling of shaft & critical speed problem	ay	
31	12	Vibration problems.	ay	
32	13	Torsional Vibration, Natural freq.	ay	
33	17	Natural freq. of 2 Rotor, 3 Rotor system	ay	
34	18	7/ 3 Rotor system	ay	
35	19	7/ geared system	ay	
36	20	Transverse Vibrahons	ay	
37	24	Natural freq. of 7/	ay	
38	25	Problems on transverse vibrahon	ay	
39	27	Balancing of machinery static & dynamic	ay	
40	01-06-21	7/ of Rotating masses	ay	
41	02	7/ 7/ Static & dynamic	ay	
42	03	Balancing of single cylinder, Multi cylinder	ay	
43	07	Partial Balancing of Reci. masses	ay	
44	08	Balancing of Linkages	ay	
45	09	7/ problems	ay	
46	10-06-21	7/ problems.	ay	

UNIT-III / IV

UNIT V

UNIT VI

Teaching Plan (Subject Code:7ME01)Subject: Machine Design and Drawing-II

Unit	Topic covered	Period
I	a)**Design of Shaft** : Material, Design on the basis of strength considering shaft subjected to - Twisting moment only	1
		2
	Bending moment only - Combine twisting and bending moment	3
	Combine twisting and bending moment - Design on the basis of rigidity.	4
	b) **Design of Key** - types, strength of key	5
	c) **Design of coupling** - types, requirements of good couplings, design of sleeve coupling, clamp or compression coupling	6
	rigid flange coupling, flexible flange coupling.	7
	d) **Design of fly-wheel** : Function, coefficients of fluctuation of speed and energy, energy stored in fly wheel,	8
	construction, stresses in fly wheel arms and rim, Design of fly wheel based on T-M diagram,	9
	fly wheel for Otto cycle engines and punching machines.	10
II	a)**Antifriction Bearings**: Types of bearing, construction, designations, standard load ratings by AFBMA for static and dynamic loads,	11
	life of bearings, selection of bearings, lubrication, mounting and enclosure.	12
	b) **Journal bearings**: lubrication of bearings, stable lubrication, Thick film lubrication, pressure distribution, minimum film thickness, relations of variables-viscosity,	13
	coefficient of friction, speed, pressure, length and diameter, bearing modulus, viscosity-Temperature chart, Summerfield number, selection of lubricant, design procedure and numericals.	14
	design procedure and numericals.	15
	c) **Design of belts-** Flat belts -types, material and construction of belt, types of drives, slip, creep, Design of belt.	16
	V-Belts -Construction and types, design of V belts.	17
	d) **Wire Rope** -Selection ,Construction, classification ,designations, stresses in wire rope,	18
	selection of wire rope for given loads.	19
III	Design of Gears Classification, law of gearing, forms and system of teeth, interference	20
	beam strength of teeth, dynamic tooth load, wear tooth load, tooth failure.	21
	a) **Spur gear** –Design of gear	22
	Design problems of gear	23
	b) **Helical gear** -Classification face width, formative teeth number, strength of gear	24
	Design of helical gear	25
	c) **Bevel gear**- Classification, pitch angles, strength of gear, Design of gear	26
	d) **Worm gear** -Types, efficiency of gear, Design of gear.	27
	Design problems on bevel and worm gear	28
IV	a)**Design of I.C.Engine parts**: Design of Cylinder, Piston	29
	Piston rings, Piston pin, Connecting rod and Crank.	30
	Design problems on Connecting rod	31
	Design problems on Connecting rod	32
	b)**Design and Drawing of Governor** (Parts and Assembly): Types of Governors.	33
	Design procedure of Hartnell's governer (including design of Spring, spindle, lever and balls).	34
	Design procedure of governer parts (including design of Spring, spindle, lever and balls).	35
	problem of Hartnell's governer (including design of Spring, spindle, lever and balls).	36
	problem of complete Hartnell's governer	

(ONLine mode)

Odd/Even Semester 2020-21) (W-20)

Execution Plan

Name of Faculty:- Dr. C.R. Patil   Semester 7th.   Section: A/B/C   A.

Subject Code: 7ME01   Subject Name: Machine Design & Drawing-II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
01	13/8/20	Design of key, types of key		
02	14/8/20	Shaft classifications & Introduction		
—	15/8/20	Holiday — Indep. day —		
03	20-8-20	Design of shaft on basis of Twisting		
04	21-8-20	71 bending		
	22/8/20	Holiday — Ganesh chaturthi —		
05	27-8.20	Design of shaft on basis of combine T&B.		
06	28-8-20	Problems on shaft		
07	29-8-20	71 71		Sign of
08	3-9.20	Types of Couplings		
09	4.9.20	Design th. of 71		
10	5-9.20	problems on 71		
11	10-9-20	71 71 flywheel.		
12	11-9-20	71 71 71		
13	12-9-20	71 71 71		
	17-9-20	Holiday — Sarvapitra Amavasya —		
14	18-9-20	Types of Bearings		
15	19-9-20	71 Roller 71 /Ball		
16	24-9-20	71 Sliding contact Bearings		
17	25-9-20	problems of 71		
18	26-9-20	71 71		
19	01-10-20	Types of Drives		
	02-10-20	Holiday — Mahatma Gandhi Birth Anniv. —		
20	03-10-20	Design of flat belt drive		
21	08-10-20	problems of 71		
22	09-10-20	Design of V-belts drive		
23	10-10-20	problem of 71 Rope drives		
24	15-10-20	— Test-I (class Test) &		

UNIT-I

UNIT-II

page 01/02

25) 16-10-20 — Test
26) 17-10-20 — Test

27) 22-10-20 — Types of gears — *Cadl*
28) 23-16-20 — Terminology, Law, intefer of gears — *Cadl*
29) 24-10-20 — Design of Spur gears — *Cart*
30) 29-10-20 — problem of 7/ — *Cart*
→ (30-10-20) — Id-E-milid (Holiday) — *Cadl*
31) 31-10-20 — problems of spur gears — *Cadl*
32) 5-11-20 — 7/ Warm 7/ — *Cadl*
33) 6-11-20 — 7/ 7/ — *Cadl*
34) 7-11-20 — 7/ Helicle 7/ — *Cadl*
35) 12-11-20 — 7/ 7/ — *Cadl*
36) 13-11-20
(14-11-20) — Laxmi Pujan (Holiday)

37) 26-11-20 — problem of spur gear — *Cart*
38) 27-11-20 — 7/ 7/ — *Cart*
39) 28-11-20 — 7/ 7/ — *Cart*
40) 3-12-20 — Introduction of I.C. Engine parts — *Cart*
41) 4-12-20 — failure of 7/ — *Cadl*
42) 5-12-20 — Failure of c. Rod. — *Cadl*
43) 10-1-21 — Design of c.R. — *Cadl*
44) 11-1-21 — problem of c.R. — *Cart*
45) 12-1-21 — Design of Govenor.
46) 17-1-21 — 7/ Belcrank lever
47) 18-1-21 — problem of 7/ — *Cadl*
48) 19-1-21 — 7/
49) 24-1-21 — 7/
(25-12-20) — christmas day (Holiday)

50) 26-12-20 — problem of Hartnell's govenor — *Cadl*
51) 01-01-21 — 7/ 7/ — *Cadl*
52) 02-01-21 — Revision — *Cart*
53) 08-01-2021 — 7/ — *Cadl*
54) 09-01-2021 — 7/ — *Cart*
⟵ (11-01-21 to 15-01-21) — class Test -II

page - 02/02

Teaching Plan
VIII Semester Mechanical
Subject: (8SM3) Automobile Engineering

L.N.	Unit	Topic	Remark
1.		Subsystems of automobile	
2.		Classification of automobiles, chassis, layout types, specifications of automobile	
3.	I	Power Unit:-Functions and locations, power for propulsion,	
4.		Acceleration, hill climbing, gradiability	
5.		Engine mounting, engine parts-	
6.		Types, construction and functions	
7.		Multiple cylinder engines. General considerations of engine balance, vibration	
8.		Firing order, road performance curves	
9.		Fuel feed systems for petrol engines,	
10.		fuel pumps	
11.		Fuel filters, fuel gauges, air filters	
12.		Basic principles of MPFI and CRDI". Multipoint Fuel Injection systems (MPFI)	
13.	II	Common Rail Diesel Injection systems (CRDI), Cooling system-purpose, types	
14.		Liquid cooling system-water jackets and ports, water pump and radiators	
15.		By pass recirculation system	
16.		Temp indicators, antifreeze mixtures, troubles and remedies	
17.		The electrical systems. Battery Capacity- standard capacity rating, battery life	
18.		Testing, recharging, starter motor drives-bendix	
19.		Overrunning clutch drive, solenoid switch	
20.	III	Ignition system:- Battery coil	
21.		Magneto ignition system	
22.		Ignition timing and its effect on engine performance	
23.		Ignition advance mechanisms	
24.		Electronic ignition system	
25.		Transmission system:- Construction, transmission, requirements of single plate friction clutch and multi plate, clutch	
26.		Clutch adjustments, clutch troubles and remedies	
27.	IV	Gear Boxes : Sliding mash, constant mesh	
28.		Synchromesh gear box	
29.		Function of over drives, trouble shooting and remedies	
30.		Propeller shaft, hotchkiss drive	
31.		Torque tube drive, differential	
32.		Braking system:- Mechanical, hydraulic brakes	
33.		Power brakes, and vacuum brakes	
34.		Fault finding and maintenance of brakes	
35.	V	Steering system:- Function, types of linkages	
36.		Steering gears	
37.		Steering gear ratio, reversibility of steering gears	
38.		Wheel alignment, camber, castor, king pin inclination, toe-in and toe-out and their effects, Introduction to power steering	
39.		Suspensions :- Rigid, axle and independent suspension system	
40.		Types of shock absorbers	
41.		Auto lubrication:- Types of lubricants, their tests and ratings	
42.	VI	Multi viscosity oils, chassis lubrication	
43.		Engine lubrication: types of lubricating systems	
44.		Oil pump, oil filters systems-by pass system, full flow system	
45.		Oil breather, crank case ventilation, Engine lubrication troubles and remedies	

Odd/Even Semester 2020-21)
Execution Plan
Name of Faculty:- H.D. Patil _____ Semester VIII th Section: A/B/C   B
Subject Code: _____   Subject Name: Automobile Engg.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18-1	Unit. I classification of automobile.	hp	Online class
2	20-1	chasis & layout type.	hp	-11-
3	21-1	Engine Parts.	hp	-11-
4	27-1	Multiple Cylinder engine.	hp	-11-
5	28-1	Firing order.	hp	-11-
6	1-2	Power Unit → function & location	hp	-11-
7	2-2	Acc.", hill climbing, geadiability.	hp	-11-
8	4-2	Unit. II. Fuel feed System.	hp	-11-
9	9-2	Fuel Pumps.	hp	-11-
10	11-2	Fuel filters, air filters	hp	-11-
11	15-2	MPFT & CRDI	hp	-11-
12	17-2	Cooling system - Importance.	hp	-11-
13	18-2	Types of Cooling System.	hp	-11-
14	23-2	Parts use in cooling system	hp	-11-
15	24-2	Unit III The electrical system	hp	-11-
16	25-2	std. Capacity Ratings	hp	-11-
17	2-3	starter motor drive → Bendix	hp	-11-
18	3-3	Ignition system → Battery coil.	hp	-11-
19	4-3	Magneto ignition system.	hp	-11-
20	9-3	Ignition advance mechanism.	hp	-11-
21	10-3	Electronic ignition System.	hp	-11-
22	12-4	Unit IV Transmission system.	hp	-11-
23	15-4	Working of clutch & types.	hp	-11-
24	19-4	Working of Gear box.	hp	-11-
25	20-4	Types of gear box.	hp	-11-
26	29-4	Differential working.	hp	-11-
27	3-5	Hotchkiss drive.	hp	-11-
28	5-5	Torque tube drive	hp	-11-

Name of Faculty:- H.D. Patil   Semester VIII th   Section: A/B/C   B

Subject Code: _____   Subject Name: ___ Automobile Engg

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	6-5	Unit-V Braking System	hp	online class
30	11-5	Mechanical & Hydraulic Brake	hp	-||-
31	13-5	Power brake & Vacuum brake	hp	-||-
32	17-5	steering system - function.	hp	-||-
33	19-5	Types of steering system.	hp	-||-
34	20-5	steering gear & wheel alignment	hp	-||-
35	25-5	Power steering	hp	-||-
36	27-5	Unit VI Suspension	hp	-||-
37	1-6	Types of shock absorber	hp	-||-
38	2-6	Independant suspension system.	hp	-||-
39	3-6	Types of Lubricant	hp	-||-
40	7-6	Engine lubrication.	hp	-||-
41	8-6	Types of lubrication system	hp	-||-
42	9-6	Oil pump & crank case ventilation.	hp	-||-

Head
Deptt of Mechanical Engineering
P.R.M.I.T & R. Badnera

Teaching Plan
V Semester Mechanical
Subject:- Heat Transfer (5ME01)

L.N.	Unit	Topic	Remark
1		Introduction, Applications of heat transfer in engineering.	
2		Modes of heat transfer, basic laws of heat transfer and their basic equations	
3		Conduction- thermal conductivity, effect of phase & temperature on thermal conductivity.	
4		one dimensional steady state heat conduction through slab, cylinder & sphere- simple	
5	I	one dimensional steady state heat conduction through slab, cylinder & sphere- composite	
6		Combined conduction- convection, overall heat transfer coefficient.	
7		General heat conduction differential equation.	
8		One dimensional steady state conduction with internal heat generation for infinite slab	
9		One dimensional steady state conduction with internal heat generation for wire & cylinder	
10		Insulations, critical radius of insulation, insulation thickness.	
11		Conduction through extended surfaces	
12		Analysis of a uniform c.s. fin	
13		Fin efficiency, fin effectiveness	
14	II	Biot number, its effect on effectiveness	
15		Introduction to unsteady state heat conduction, Newton's law of cooling	
16		Lumped heat capacity analysis.	
17		lumped heat capacity analysis, contd.	
18		Radiation- general concepts and definitions, black body & grey body concept.	
19		Laws of radiation-Kirchoff's law, Planck's law.	
20		Wien's displacement law, Stephen Boltzmann law, Lambert's cosine law	
21	III	Concept of shape factor, emmisivity factor	
22		Heat transfer coefficient of radiation, radiation heat transfer equation	
23		Radiation errors in temperature measurement	
24		Radiation shield.	
25		Forced convection- heat convection, forced and natural convection	
26		Boundary layer theory- hydrodynamic boundary layer,	
27		thermal boundary layer, boundary layer thickness	
28		Laminar & turbulent flow over flat plate and through pipes & tubes	
29	IV	Dimensionless numbers-Reynold, Prandtl, Nusselt, Grashoff number,	
30		Physical significance of these numbers	
31		Empirical correlations for forced convection for flow over flat plate, through pipes & tubes.	
32		Applications of these numbers & correlations in problem solving	
33		Free convection- velocity and thermal boundary layers for vertical plate	
34		Free convection over vertical cylinder and horizontal plate/cylinder	
35		The empirical correlations for the above configurations	
36	V	Use of empirical correlations in problem solving.	
37		Condensation & Boiling - Introduction to condensation heat transfer, film & drop condensation	
38		Boiling heat transfer	
39		Pool boiling curves	
40		Heat exchangers – introduction, applications, classification	
41		Overall heat transfer coefficient- concept & formulae	
42		Fouling of heat exchangers, fouling factors, effect on heat exchanger performance	
43	VI	Analysis of heat exchangers- LMTD method,	
44		Effectiveness & ENTU method	
45		Temperature profiles, Selection of heat exchangers	
		introduction to working of heat pipe with and without wick	

Execution Plan

Name of Faculty:- H.D. Patil   Semester V^{th} Section: A/B/C | A |

Subject Code: 5 ME02   Subject Name: Heat Transfer

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11-8	Unit-I Introduction & Application of H.T.	hp	Online class
2	12-8	Modes of H.T.	hp	Online class
3	14-8	Basic Laws of H.T.	hp	-||-
4	18-8	General Heat conduction eq^n	hp	-||-
5	19-8	H.T. through slab eq^n	hp	-||-
6	20-8	H.T. through Cylinder eq^n	hp	-||-
7	24-8	H.T. through sphere eq^n	hp	-||-
8	28-8	steady state Heat conduction	hp	-||-
9	2-9	Internal heat generation	hp	-||-
10	7-9	Numerical	hp	-||-
11	8-9	-||-	hp	-||-
12	9-9	-||-	hp	-||-
13	11-9	Unit-II Insulation Introduction	hp	-||-
14	14-9	Critical Thickness of Insulation	hp	-||-
15	15-9	Analysis of fin.	hp	-||-
16	18-9	Fin efficiency & effectiveness	hp	-||-
17	21-9	Unsteady state heat conductions	hp	-||-
18	23-9	Lumped heat capacity Method	hp	-||-
19	25-9	Numerical	hp	-||-
20	28-9	-||-	hp	-||-
21	30-9	Unit-III Radiations concept	hp	-||-
22	1-10	Laws of Radiation	hp	-||-
23	5-10	Black body, Grey body	hp	-||-
24	6-10	Emmission Properties of body	hp	-||-
25	9-10	Radiation shield.	hp	-||-
26	20-10	Numerical	hp	-||-
27	21-10	Numerical	hp	-||-
28	22-10	-||-	hp	-||-

Name of Faculty:- **H.D. Patil** Semester **V** th Section: A/B/C **A**

Subject Code: **5ME02** Subject Name: **Heat Transfer**

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
			hy	Online Class
29	23-10	Unit IV Forced Convection	hy	-||-
30	26-10	Hydrodynamic Boundary Layer	hy	-||-
31	28-10	Thermal boundary layer	hy	-||-
32	2-11	Non-Dimensional Numbers	hy	-||-
33	4-11	Physical Significance of those nos.	hy	-||-
34	6-11	Numerical & Empirical correlations	hy	-||-
35	9-11	-||-	hy	-||-
36	10-11	-||-	hy	-||-
37	20-11	Unit V Free Convection	hy	-||-
38	24-11	Boundary layer for flat Plate	hy	-||-
39	25-11	Condensation Heat Transfer	hy	-||-
40	26-11	Boiling Heat Transfer	hy	-||-
41	1-12	Pool Boiling curve	hy	-||-
42	3-12	Empirical correlations	hy	-||-
43	4-12	Numerical	hy	-||-
44	8-12	-||-	hy	-||-
45	9-12	Unit VI Introduction to Heat exchanger	hy	-||-
46	10-12	Application & classification	hy	-||-
47	14-12	Analysis of H.E. → LMTD method	hy	-||-
48	18-12	ENTU method	hy	-||-
49	21-12	Introduction to Heat Pipe	hy	-||-
50	22-12	Types of Heat Pipe	hy	-||-
51	24-12	Numericals	hy	-||-
52	4-1	-||-	hy	-||-

Teaching Plan (First Session: 2020-21)

Name of Faculty: Dr H.M. Deshmukh   Semester: VII Section: B
Subject Code: 7ME03   Subject Name: Ind Mgt & Costing

Lecture No	Topics Covered	Unit No.
1	Introduction to management, functions of management	Unit-I
2	Scientific & Administrative management theory & principles	Unit-I
3	Human Behaviour theory, Maslow's Motivation theory	Unit-I
4	Theory X & Y, Systems theory, Contingency theory	Unit-I
5	Principles of organization	Unit-I
6	Delegation of Authority, Centralization & Decentralization	Unit-I
7	Types of organization structures	Unit-I
8	Introduction to marketing mgt, consumer behavior	Unit-II
9	Marketing strategy, Market research	Unit-II
10	Marketing strategy, types of market	Unit-II
11	Advertising- types & process	Unit-II
12	New product development	Unit-II
13	Product life cycle, sales organization	Unit-II
14	Method of selling, buying motives	Unit-II
15	Introduction to Costing, Objectives of costing	Unit-V
16	Methods of costing	Unit-V
17	Elements of cost	Unit-V
18	Cost sheet format, Numerical on elements of cost	Unit-V
19	Numericals on Cost sheet	Unit-V
20	Numericals on Cost sheet, unit costing	Unit-V
21	Numericals on Standard costing, Process costing	Unit-V
22	Numericals on Process costing	Unit-V
23	Functions of Personnel Mgt, Human Resource Planning	Unit-III
24	Recruitment, training & development	Unit-III
25	Workers participation in mgt collective bargaining	Unit-III
26	Materials management, classes of materials	Unit-III
27	Material control, scope, function & procedure of purchasing	Unit-III
28	Inventory control, numericals on inventory control	Unit III
29	Objectives of Estimation, Costing Vs Estimation	Unit IV
30	Estimation procedure , Principal factors of Estimation	Unit-IV
31	Steps in Calculation of weights of metal	Unit-IV
32	Numericals on Weight calculation of metal	Unit IV
33	Numericals on machining time calculation	Unit IV
34	Estimation of Forging & Foundry cost	Unit-IV

Lecture No	Topics Covered	Unit No.
35	Meaning- Business finance, Kinds of capital	Unit VI
36	Sources of fixed & working capital	Unit VI
37	Profit & Loss statement	Unit VI
38	Concept of Balance Sheet	Unit VI
39	Meaning & methods of calculation of Depreciation	Unit VI
40	Meaning & methods of calculation of Depreciation	Unit VI

Subject Faculty
Department of Mechanical Engg
PRMIT&R, Badnera

Head
Department of Mechanical Engg
PRMIT&R, Badnera

Execution Plan (First Session: 2020-21)
Name of Faculty: Dr H.M. Deshmukh   Semester: VII Section: B
Subject Code: 7ME03   Subject Name: Ind Mgt & Costing

Lecture No	Date	Topics Covered	Unit No.
1	17/08/2020	Introduction to management, functions of management	Unit-I
2	18/08/2020	Scientific & Administrative management theory & principles	Unit-I
	19/08/2020	**Holiday (Pola)**	
3	20/08/2020	Human Behaviour theory, Maslow's Motivation theory	Unit-I
4	24/08/2020	Theory X & Y, Systems theory, Contingency theory	Unit-I
5	25/08/2020	Principles of organization	Unit-I
	26/08/2020	**Holiday (Gouri Pujan)**	
6	27/08/2020	Delegation of Authority, Centralization & Decentralization	Unit-I
7	31/08/2020	Types of organization structures	Unit-I
	01/09/2020	**Holiday (Anant Chaturdashi)**	
8	02/09/2020	Introduction to marketing mgt, consumer behavior	Unit-II
9	03/09/2020	Marketing strategy, Market research	Unit-II
10	07/09/2020	Marketing strategy, types of market	Unit-II
	08/09/2020	**Attended Online Faculty meeting-SGBAU**	
11	09/09/2020	Advertising- types & process	Unit-II
12	10/09/2020	New product development	Unit-II
	14/09/2020	**Busy in LEC visit to college**	
13	15/09/2020	Product life cycle, sales organization	Unit-II
14	16/09/2020	Method of selling, buying motives	Unit-II
	17/09/2020	**Holiday (Sarvapitri Amavsya)**	
15	21/09/2020	Introduction to Costing, Objectives of costing	Unit-V
16	22/09/2020	Methods of costing	Unit-V
17	23/09/2020	Elements of cost	Unit-V
18	24/09/2020	Cost sheet format, Numerical on elements of cost	Unit-V
19	28/09/2020	Numericals on Cost sheet	Unit-V
20	29/09/2020	Numericals on Cost sheet, unit costing	Unit-V
21	30/09/2020	Numericals on Standard costing, Process costing	Unit-V
22	01/10/2020	Numericals on Process costing	Unit-V
23	05/10/2020	Functions of Personnel Mgt, Human Resource Planning	Unit-III
	06/10/2020	**Urgent college work (hall tickets)**	
24	07/10/2020	Recruitment, training & development	Unit-III
25	08/10/2020	Workers participation in mgt collective bargaining	Unit-III
26	12/10/2020	Materials management, classes of materials	Unit-III
	13/10/2020	**Not feeling well**	
27	14/10/2020	Material control, scope, function & procedure of purchasing	Unit-III

	15/10/2020	Common Test 1	
	19/10/2020	Cognizant Placement Drive	
	20/10/2020	TCS brush up	
	21/10/2020	TCS brush up	
	22/10/2020	TCS brush up	
	26/10/2020	Univ Online exam of VIII semester	
	27/10/2020	Univ Online exam of VIII semester	
	28/10/2020	Univ Online exam of VIII semester	
	29/10/2020	Univ Online exam of VIII semester	
	02/11/2020	Univ Online exam of VIII semester	
28	03/11/2020	Inventory control, numericals on inventory control	Unit III
29	23/11/2020	Objectives of Estimation, Costing Vs Estimation	Unit IV
	24/11/2020	Technical problem	
	25/11/2020	Final year Seminar schedule	
	26/11/2020	Final year Seminar schedule	
	30/11/2020	Gurunanak Jayanti	
	01/12/2020	Teacher Constituency Election Voting	
	02/12/2020	Attended LEC meeting at HVPM COE&T	
30	03/12/2020	Estimation procedure , Principal factors of Estimation	Unit-IV
31	07/12/2020	Steps in Calculation of weights of metal	Unit-IV
32	08/12/2020	Numericals on Weight calculation of metal	Unit IV
33	09/12/2020	Numericals on machining time calculation	Unit IV
34		Estimation of Forging & Foundry cost	Unit-IV
	10/12/2020	Technical problem	
35	14/12/2020	Meaning- Business finance, Kinds of capital	Unit VI
36	15/12/2020	Sources of fixed & working capital	Unit VI
37	16/12/2020	Profit & Loss statement	Unit VI
38	17/12/2020	Concept of Balance Sheet	Unit VI
39	21/12/2020	Meaning & methods of calculation of Depreciation	Unit VI

Subject Faculty
Department of Mechanical Engg
PRMIT&R, Badnera

Head
Department of Mechanical Engg
PRMIT&R, Badnera

Teaching Plan
V Semester Mechanical
Subject: (5ME02) Heat Transfer

L.N.	Unit	Topic	Remark
1.		Introduction, Applications of heat transfer in engineering.	
2.		Modes of heat transfer, basic laws of heat transfer and their basic equations.	
3.		Conduction- thermal conductivity, effect of phase & temperature on thermal conductivity.	
4.		one dimensional steady state heat conduction through slab, cylinder & sphere- simple	
5.	I	one dimensional steady state heat conduction through slab, cylinder & sphere- composite	
6.		Combined conduction- convection, overall heat transfer coefficient.	
7.		General heat conduction differential equation.	
8.		One dimensional steady state conduction with internal heat generation for infinite slab	
9.		One dimensional steady state conduction with internal heat generation for wire & cylinder	
10.		Insulations, critical radius of insulation, insulation thickness.	
11.		Conduction through extended surfaces	
12.		Analysis of a uniform c.s. fin	
13.		Fin efficiency, fin effectiveness	
14.	II	Biot number, its effect on effectiveness	
15.		Introduction to unsteady state heat conduction, Newton's law of cooling	
16.		Lumped heat capacity analysis.	
17.		lumped heat capacity analysis, contd.	
18.		Radiation- general concepts and definitions, black body & grey body concept.	
19.		Laws of radiation-Kirchoff's law, Planck's law.	
20.		Wien's displacement law, Stephen Boltzmann'law, Lambert's cosine law	
21.	III	Concept of shape factor, emmisivity factor	
22.		Heat transfer coefficient of radiation, radiation heat transfer equation	
23.		Radiation errors in temperature measurement	
24.		Radiation shield.	
25.		Forced convection- heat convection, forced and natural convection	
26.		Boundary layer theory- hydrodynamic boundary layer.	
27.		thermal boundary layer, boundary layer thickness	
28.		Laminar & turbulent flow over flat plate and through pipes & tubes	
29.	IV	Dimensionless numbers-Reynold, Prandtl, Nusselt, Grashoff number.	
30.		Physical significance of these numbers	
31.		Empirical correlations for forced convection for flow over flat plate, through pipes & tubes.	
32.		Applications of these numbers & correlations in problem solving	
33.		Free convection- velocity and thermal boundary layers for vertical plate	
34.		Free convection over vertical cylinder and horizontal plate/cylinder	
35.		The empirical correlations for the above configurations	
36.	V	Use of empirical correlations in problem solving.	
37.		Condensation & Boiling - Introduction to condensation heat transfer, film & drop condensation	
38.		Boiling heat transfer	
39.		Pool boiling curves	
40.		Heat exchangers – introduction, applications, classification	
41.		Overall heat transfer coefficient- concept & formulae	
42.		Fouling of heat exchangers, fouling factors, effect on heat exchanger performance	
43.	VI	Analysis of heat exchangers- LMTD method,	
44.		Effectiveness & ENTU method	
45.		Temperature profiles, Selection of heat exchangers	
46.		Introduction to working of heat pipe with and without wick	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- **K. M. Watt**   Semester **V**   Section: A/B/C   **B**

Subject Code: **5 M E 0 2**   Subject Name: **HEAT TRANSFER**

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	17/8/20	Introduction, Applications of HT in Engg.	Kw	Online class
2	18/8/20	Modes of heat transfer, basic laws of heat tr: & their basic equations	Kw	—''—
3	20/8/20	Conduction - thermal conductivity, effect on phase & temp on th. cond	Kw	—''—
4	21/8/20	One dimensional steady state heat conduction thro' slab, cyl & sphere	Kw	—''—
5	24/8/20	One dimensional s.s. heat conduction thro' composite slab, cyl & sphere	Kw	—''—
6	25/8/20	Combined Cond-conv, overall ht tr coeff.	Kw	—''—
7	27/8/20	General heat conduction diff eqn	Kw	—''—
8	28/8/20	1D SS ht cond with internal ht. generation	Kw	—''—
9	31/8/20	for infinite slab, wire & cylinder	Kw	—''—
10	02/9/20	Insulations, critical radius.	Kw	—''—
11	03/9/20	Conduction thro' extended surfaces	Kw	—''—
12	04/9/20	Analysis of a unifor c.s. fin	Kw	—''—
13	07/9/20	Fin efficiency and effectiveness	Kw	—''—
14	08/9/20	Biot no., its effect on effectiveness	Kw	—''—
15	09/9/20	Unsteady state ht cond, Newton's law	Kw	—''—
16	10/9/20	Lumped heat capacity analysis	Kw	—''—
17	11/9/20	Transient heat conduction	Kw	—''—
18	14/9/20	Radiation, black & grey body concept	Kw	—''—
19	15/9/20	Laws of radiation - Kirchoff's, Plank's law	Kw	—''—
20	16/9/20	Wien's, Stefan Boltzmann's, Lamberts' law	Kw	—''—
21	18/9/20	Shape factor & emisivity factor	Kw	—''—
22	21/9/20	Ht. tr. coeff, radiation ht. tr. equation	Kw	—''—

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:-_____ Semester_____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
23	22/9/20	Radiation errors in temp. measurement	✓	Online class
24	23/9/20	Radiation shield	✓	—"—
25	24/9/20	Heat convection - forced & natural	✓	—"—
26	25/9/20	Boundary layer theory - hydrodynamic	✓	—"—
27	01/10/20	thermal b. layer, b. layer thickness	✓	—"—
28	05/10/20	Laminar & turbulent flow - plate & pipe	✓	—"—
29	06/10/20	Dimensionless numbers	✓	—"—
30	07/10/20	Physical significance of these nos.	✓	—"—
31	08/10/20	Empirical corelations - forced conv	✓	—"—
32	09/10/20	Applications in problem solving	✓	—"—
33	12/10/20	Free Convection - Velocity & thermal boundary layers for vertical plate	✓	—"—
34	13/10/20	Free convection over vertical cyl, & horizontal plate/cyl.	✓	—"—
35	14/10/20	Empirical corelations for these	✓	—"—
36	16/10/20	Use of corelations in problem solving	✓	—"—
37	19/10/20	Condensation & Boiling, film & drop condensation	✓	—"—
38	20/10/20	Boiling heat transfer,	✓	—"—
39	21/10/20	Pool boiling curves	✓	—"—
40	22/10/20	Heat Exchangers - applications, classification	✓	—"—
41	23/10/20	Overall heat transfer coefficient	✓	—"—
42	03/11/20	Fouling, fouling factors, effects	✓	—"—
43	04/11/20	Analysis of HE, LMTD method	✓	—"—
44	05/11/20	Effectiveness & ENTU method	✓	—"—
45	06/11/20	Temp. profiles, selection of heat exchangers	✓	—"—
46.	23/11/20	Heat pipes with & without wick	✓	—"—

Subject: I.C.ENGINES   Semester: VIII   Subject Code: 8ME0

Lecture No.	Unit	Topic Covered	Remark
1	I	Basic of I.C.Engines.	
2		Details of two stroke and four stroke engines.	
3		Air standard cycles.	
4		Fuel air cycle.	
5		Actual cycle.	
6		Variation in specific heat, Dissociation and their effect on engine performance.	
7		Review of other losses in IC engines.	
8	II	Conventional fuels for IC engines.	
9		Requirement, properties, fuel additive, limitations of fossil fuels.	
10		Review of various alternative/non-conventional fuels.	
11		Studies of fuel injection systems.	
12		Fuel pump and its working.	
13		Different types of fuel feed systems.	
14		Studies of injectors nozzles.	
15		Bosch type fuel pump.	
16	III	Combustion in SI engines.	
17		Stages of combustion.	
18		Factors influencing various stages.	
19		Normal and abnormal combustion, Detonation, Factors responsible for detonation.	
20		Effect of detonation. Octane rating of fuel.	
21		Requirement of combustion chambers for SI engines.	
22		Important types of combustion chambers for SI engines.	
23		Relative advantages and disadvantages and application.	
24	IV	Combustion in CI engines.	
25		Stages of combustion in CI Engines	
26		Delay period, factor affecting delay period.	
27		Diesel knock, cetane rating.	
28		Requirements of combustion chamber for CI Engines.	
29		Methods of generating turbulence in combustion chamber.	
30		Combustion chambers for CI Engies.	
31		Types of combustion chambers for CI Engies.	
32	V	Evaluation of various performance parameters of IC Engines.	
33		Heat balance sheet.	
34		Heat balance sheet calculation.	
35		Excess air calculation.	
36		Methods of determination of friction power.	
37		Friction power calculations.	
38		Supercharging: Basic principles, objectives.	
39		Arrangements for super charging, advantages and limitations.	
40	VI	Emission from IC Engines .	
41		Review, their effect on human health.	
42		Cause of formation and approaches to control this pollutants.	
43		Study of BIS, EURO emission norms.	
44		IC Engines: Recent trends: Microprocessor based engines.	
45		Multi-point fuel injection engines.	
46		Common rail direct injections engines.	
47		Variable valve timing engines.	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- K.M.Watt   Semester VIII   Section: A/B/C   [A]

Subject Code: 8ME03   Subject Name: I.C. Engines

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18/1/21	Basics of IC Engines	Kw	Online Class
2	25/1/21	Details of two & four stroke engines	Kw	— ". —
3	27/1/21	Air Standard Cycles — analysis	Kw	— " —
4	01/2/21	Fuel air cycle - analysis	Kw	— " —
5	02/2/21	Actual cycle - analysis	Kw	— " —
6	03/2/21	Variation in specific heat, Dissociation & their effect on en.performance	Kw	— " —
7	04/2/21	Review of other losses in I.C.Engines	Kw	— " —
8	15/2/21	Conventional fuels for I.C. Engines	Kw	— " —
9	16/2/21	Requirements, properties, fuel additives and limitations of fossil fuels	Kw	— " —
10	17/2/21	Review of various non-conventional fuels	Kw	— " —
11	18/2/21	Study of fuel injection systems	Kw	— " —
12	22/2/21	Fuel pump & its working	Kw	— " —
13	23/2/21	Different types of fuel feed systems	Kw	— " —
14	24/2/21	Study of injector & injector nozzles	Kw	— " —
15	01/3/21	Bosch type fuel pump	Kw	— " —
16	02/3/21	Combustion in S.I. Engines	Kw	— " —
17	03/3/21	Stages of combustion	Kw	— " —
18	04/3/21	Factors influencing these stages	Kw	— " —
19	08/3/21	Normal & abnormal combustion, Detonation, factors influencing detonation	Kw	— " —
20	09/3/21	Effect of detonation, Octane rating	Kw	— " —
21	10/3/21	Requirements of S.I en. combustion chambers	Kw	— " —
22	15/4/21	Types of comb.chambers for SI engines	Kw	— " —
23	19/4/21	Advantages, disadvantages & applications of these chambers	Kw	— " —

Name of Faculty:-_____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name:_____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
24	20/4/21	Combustion in C I Engines	Ke	Online class
25	22/4/21	Stages of combustion in CI engines	Ke	"
26	28/4/21	Delay period & factors affecting this	Ke	-"
27	29/4/21	Diesel knock, Cetane rating	Ke	"
28	03/5/21	Requirements of comb.chambers - CI eng.	Ke	-"
29	04/5/21	Methode of generating turbulence in cc	Ke	-"
30	05/5/21	Combustion chambers for CI engines	Ke	-"
31	06/5/21	Combustion chambers types for CI engine	Ke	-"
32	10/5/21	Evaluation of performance parameters - ICE	Ke	-"
33	11/5/21	Preparation of Heat balance sheet	Ke	-"
34	12/5/21	Heat balance sheet calculations	Ke	-"
35	17/5/21	Excess air calculations	Ke	-"
36	18/5/21	Determination of friction power - methods	Ke	-"
37	19/5/21	Friction power calculations	Ke	-"
38	20/5/21	Supercharging - basic principles, objectives	Ke	-"
39	24/5/21	Supercharging methode, adv. & limitations	Ke	-"
40	25/5/21	Emissions from I C Engines	Ke	-"
41	27/5/21	Review, Effect of emissions on human health	Ke	-"
42	01/6/21	Causes of formation & methods to control	Ke	-"
43	02/6/21	BIS & EURO emission norms	Ke	-"
44	03/6/21	Recent trends in I C engines	Ke	-"
45	07/6/21	MPFI & CRDI engines	Ke	-"
46	08/6/21	Variable valve timing engines	Ke	-"

Head

Deptt. of Mechanical Engineering.

P.R.M.I.T & R. Badnera

Subject: Measurement System   **Semester: V**   **Subject Code: 5ME04**

Lecture No.	Unit	Topic Covered	Remark
1	I	Generalized Measurement system: Significance of measurement,	
2		Generalized systems. Application of measuring instruments.	
3		Types of measuring instruments.	
4		General configuration and functional elements of measuring instruments	
5		types of inputs,	
6		Various methods of correction for interfering and modifying inputs.	
7	II	General performance Characteristics	
8		Static characteristics	
9		Resolution, Accuracy, Threshold	
10		Different types of errors.	
11		combination of component errors in overall systems	
12		Dynamic characteristics : General mathematical model of zero order,	
13		first order and second order instruments, response of first and second order instruments to following inputs step, ramp,	
14		Impulse and frequency.	
15	III	Strain Measurement : Types of strain gauges, strain gauge circuits, calibration,	
16		Temperature compensation, use of strain gauges on rotating shafts, selection and installation of strain gauges.	
17		Pressure Measurements	
18		Basic methods of pressure measurement: strain gauge pressure cell	
19		High pressure measurement Bridgeman type	
20		low pressure Measurement	
21		McLeod, Knudsen, ionization	
22		Thermal conductivity gauges	
23	IV	Force Measurement: Various mechanical. Hydraulic, pneumatic and electrical methods.	
24		Torque and Power Measurements :	
25		Various mechanical, hydraulic & electric methods.	
26		Flow Measurements: Construction- orifice, Rota meter.	
27		Pressure probes- Pitot static tube, turbine meter,	
28		Electro-magnetic flow meter.	
29	V	Temperature Measurements: Standards,	
30		Various temperature measuring devices	
31		Bimetallic strip, pressure thermometers	
32		thermo couples, electrical resistance thermometers	
33		Thermistors, radiation Thermometers.	
34		Liquid Level Measurements: Various methods such as- single float, displacement or force transducers	
35		Pressure sensitivity, bubbler or Page system, capacitance variation type (for both conducting and non conducting type liquids)	
36		Resistance variation type.	
37	VI	Speed Measurements	
38		Various mechanical type tachometers,	
39		Electrical type's tachometers, stroboscope etc	
40		Vibration Measurements : Seismic, Strain gauge	
41		and peizoelectric accelerometers	
42		Displacement measurements : Linear and angular displacement measurements	
43		LVDT, LDR,	
44		Capacitive & inductive pick ups.	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- P.V. Gedam   Semester V th   Section: A/B/C   A

Subject Code: 5ME 04   Subject Name: Measurement System

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	12-8-20	Generalized measurement system - defn	ff	online
2	13-8-20	Types, significance of m.s,	ff	online
3	14-8-20	Instrument	ff	online
4	19-8-20	application of measuring instrument	ff	online
5	20-8-20	Input output method of G.s.	ff	online
6	26-8-20	Interfering & modifying inputs	ff	online
7	27-8-20	General Performance ch - Static ch.	ff	online
8	2-9-20	Types of error.	ff	online
9	4-9-20	Range, Threshold.	ff	online
10	5-9-20	Resolution	ff	online
11	11-9-20	Combination of Component error.	ff	online
12	12-9-20	Dynamic ch. of measurement system	ff	online
13	17-9-20	Zero order system, first order system.	ff	online
14	19-9-20	Second order system & impulse & frequency	ff	online
15	23-9-20	Strain Measurement, Types.	ff	online
16	24-9-20	Strain Gauge Circuits, calibration,	ff	online
17	25-9-20	Selection & installation of Strain Gauge	ff	online
18	30-9-20	Pressure measurement method	ff	online
19	3-10-20	High pressure measurement I.e	ff	online
20	7-10-20	Bridgeman Gauge type. Low	ff	online
21	9-10-20	Pressure - Mcleod, knudsen Gauge.	ff	online
22	10-10-20	Thermal Conductivity Gauge	ff	online

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- P.V Gedam   Semester V th   Section: A/B/C   A

Subject Code: 5ME04   Subject Name: Measurement System.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
23	21-10-20	Force measurement & its Types.		online
24	23-10-20	definiation. Hydraulic method.		online
25	24-10-20	Torgue & Power measurement method		online
26	28-10-20	Hydraulic & electric method		online
27	29-10-20	Flow measurement - Rotameter,		online
28	19-11-20	Orifice, pitot tube, turbinemeter		online
29	20-11-20	Temperature measurement &		online
30	26-11-20	its Types. Bimetallic strips,		online
31	27-11-20	Pressure thermometer.		online
32	3-12-20	Thermistors, Radiation Thermometer		online
33	9-12-20	Liquid level measurement -		online
34	12-12-20	Sigte float.		online
35	16-12-20	Pressure sensitivity.		online
36	19-12-20	Resistance Variation Type		online
37	24-12-20	Speed measurement ⇒ various		mure
38	26-12-20	Types, Tachometer,		online
39	30-12-20	Electrical Type Tachometer,		online
40	31-12-20	Vibration measurement devices,		online
41	1-1-21	Seismic, Peizoelectric acc.		online
42	2-1-21	LVDT, LDR,		online
43	7-1-21	Capacitive & inductive pickups.		online
44	9-1-21	Linear & arzular dis measuremen		online

Head
Dept. of Mechanical Engineering
PRMIT & R. Badnera

Teaching Plan
5ME05 OPEN ELECTIVE-I
(2) MANUFACTURING TECHNIQUE

Lecture no.	Unit No.	Topic covered(Description)
1.	I	Overview Of Manufacturing:
2.		Classification Of Manufacturing Processes.
3.		Types & Amp; Properties Of Materials
4.		Selection Of Manufacturing Processes
5.		Selection of Materials..
6.		Introduction To Conventional And Non-Conventional Machining Processes.
8.	II	Introduction To Cutting Type Shaping Processes
9.		Basic Concept Of Metal Cutting,
10.		Types Of Cutting Tools,
11.		Orthogonal &Amp; Oblique Cutting,
12.		General Purpose Machines
13.		Special Purpose Machines
14.		
15.	III	Introduction &Amp; Application Of Various Metal Cutting Operations.
16.		Turning, Drilling, Boring Operations.
17.		Planning Process.Operations.
18.		Milling Operations
19.		Grinding Process.Operations
20.		
21.		
22.		
23.	IV	Introduction To Metal Forming And Sheet Metal Process:
24.		Forming Process- Rolling
25.		Forming Process-Forging,
26.		Forming Process- Extrusion,
27.		Forming Process-Wire Drawing.
28.		Sheet Metal Processes- Forming, Bending, Drawing, Coining, Embossing.
29.		Cutting Process: Punching, Blanking, Shearing,Lancing.
30.	V	Metal Casting: Steps Involved In Casting.
31.		Advantages Of Casting,
32.		Classification And Working Of Different Pattern, Difference Between Pattern And Casting
33.		Pattern Allowances,
34.		Different Type Material Used For Patterns
35.		Molding Sand, Sand Mould Making
36.		Making Core, Types Of Cores,
37.		Defects Of Castings
38.		Melting Furnace(Cupola),
39.		Different Types Of Casting Process And Its Applications
40.	VI	Joining Process :- Application For Joining Process With Its Types
41.		Advantages And Disadvantages Of Riveting
42.		Soldering, Brazing. Arc Welding, Gas Welding
43.		Different Types Of Resistance Welding, Friction Welding.

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2021-22)

Execution Plan

Free Elective

Name of Faculty:- R.S. Sakarkar   Semester V th   Section: A/B/C

Subject Code: SME05   Subject Name: Manufacturing Technique.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
	16-10-20	Overview of Manufacturing & Types of Mgf.		
	17-10-20	Classification of Mgf. process; cutting Rolling		
	17-10-20	Selection of Material & its Types & its Selection		
	23-10-20	Introduction to Cutting types diff Shaping process		
	24-10-20	Introduction to Non Conventional process		
	24-10-20	Basic concept & Theory of Metal cutting		
	31-10-20	ortho Types of cutting tools		
	31-10-20	Diff. Between Orthogonal & Oblique Cutting		
	06-11/20	Types of shaping process		HCI
	07-11-20	Conventional Vs. Non Conventional M/cs.		
	07-11-20	General Purpose machines		
	20-11-20	Special Perpose Machines.		
	21-11-20	Introduction & application of Metal Cutting		
	21-11-20	various Metal cutting operations		
	27-11-20	Turning Drilling, Boring, Milling		
	29-11-20	operations like shaping, planing		
	04-12-20	finishing process, Cutting, Tyres.		
	05-12-20	Introduction to Metal Forming Process		
	05-12-20	Sheet Metal process.		
	11-12-20	Forming, Rolling, Extrusion		
	12-12-20	Wire drawing sheet metal process		
	12-12-20	Forming, Bending, Cutting process		
	18-12-20	Drawing, coining, Embossing process		
	19-12-20	Punching, Blanking & shearing process		
	19-12-20	Metal Casting, steps		
	26-12-20	Adv & Dis-Adv of casting		

Execution Plan

Name of Faculty:- R.S.Sakarkar   Semester 6th   Section: A/B/C   Free Elective

Subject Code: SMEO5   Subject Name: Manufacturing process

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
	26-12-20	Types of patterns, Mal wed for patterns-		
	01-01-21	Cores, Types, Defects in castings		
	02-01-21	Melting furnace (Cupola)		
	02-01-21	Joining process ; Types		
	08-01-21	Reveting process ; Types.		
	09-01-21	Brazing, Resistance welding / Gas welding		
	09-01-21	Resistance welding; Types friction; Adv.		

Head of Mechanical Engineering
Dept. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Session 2020-21 (Odd sem.)

V th sem.

Teaching Plan

Manufacturing

Subject Code: SMEO5   Open Elective – I

Subject Name: Techniques.

Lecture	Topic	Date	Unit
1	Overview of Manufacturing processes.	16/10/20	
2	Classification of mfg. processes.	17/10/20	
3	Selection of Mfg process.	23/10/20	
4	Types & Properties of materials.	24/10/20	
5	Selection of proper material	24/10/20	
6	Introduction to Conventional & Non conv.m/c'ing	3/10/20	
7	Introduction to cutting type shaping processes	3/10/20	
8	Basic concept of metal cutting & Theory	6/11/20	
9	Types of cutting tool & materials	7/11/20	
10	Orthogonal & oblique cutting methods	7/11/20	
11	General purpose v/s special purpose m/cs.	20/11/20	
12	Introduction & applications of diff cutting opr.	21/11/20	
13	Description about Turning & Lathe.	21/11/20	
14	Drilling operation & Boring operation.	27/11/20	
15	Milling operation & milling cutters	28/11/20	
16	Shaping & planning operations & diff.	28/11/20	
17	Grinding processes, Grinding m/cs.	4/12/20	
18	Introduction to metal forming (sheet metal	5/12/20	
19	forging & Rolling processes with types	5/12/20	
20	Extrusion, wire drawing processes.	11/12/20	
21	Sheet bending, drawing, coining, embossing	12/12/20	
22	Cutting Processes punching, blanking, shearing, Lancing	12/12/20	
23	steps in metal Casting processes.	18/12/20	
24	Adv. of Casting, Patterns, diff bet" Casting & Pattern	19/12/20	
25	Different Pattern materials & Pattern allowances.	19/12/20	
26	Moulding sand, sand mould making cores	26/12/20	
27	Types of cores, casting defect cupola furnace	26/12/20	
28	Casting process & its applications.	1/1/21	
29	Joining Processes classification & types.	2/1/21	
30	Advantages & disadv. of riveting	2/1/21	
31	soldering, Brazing & difference between them	8/1/21	
32	Electric arc welding & Gas welding processes	9/1/21	
33	Resistance welding & friction welding process	9/1/21	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Name of Subject Teacher
Prof. V. V. Kale

Odd/Even Semester 2020-21)

Execution Plan Open Elective-1

Name of Faculty:- V. V. Kale   Semester V th   Section: A/B/C   C

Subject Code: SMF05   Subject Name: Manufacturing Technique.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	01|01|21	Casting defects, Cupola Furnace, casting applications	⑂	Online class
28	02|01|21	Joining processes with its types & classification	⑂	
29	02|01|21	Advantages & disadv. of riveting, soldering	⑂	
30	08|01|21	Brazing, Arc welding process its principle	⑂	
31	09|01|21	Gas welding process, Gas welding Flames	⑂	
32	09|01|21	Resistance welding, types, friction welding.	⑂	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21) Odd sem.

Execution Plan, Open Elective-I

Name of Faculty:- V. V. Kale   Semester V^th   Section: A/B/C   C

Subject Code: SME05   Subject Name: Manufacturing Techniques.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	16/10/20	Overview of Manufacturing & classification of mfg. processes		
2	17/10/20	Types of of Mfg processes like Casting, Rolling.		
3	17/10/20	Selection of manufacturing processes		
4	23/10/20	Properties of materials & its types, its selection		
5	24/10/20	Introduction to Conventional & Non conv. machining		
6	31/10/20	Introduction to cutting type shaping processes		
7	31/10/20	Basic concept & theory of metal cutting.		
8	06/11/20	Different types of cutting tools, classification		
9	07/11/20	Orthogonal & Oblique cutting processes.		Sign
10	07/11/20	General purpose V/s special purpose m/cs.		HOD
11	20/11/20	Introduction & applications of metal cutting		
12	21/11/20	different opr^ns on Lathe, turning operation		
13	21/11/20	Introduction to drilling & boring operations		
14	27/11/20	Milling m/c & milling operations		
15	28/11/20	Shaper & planer operations & difference		Online class
16	04/12/20	Grinding wheel contents & grinding operations.		
17	05/12/20	Introduction to metal & sheet forming operation.		
18	05/12/20	Introduction & types of forging & Rolling		
19	11/12/20	Extrusion & wire drawing process.		
20	12/12/20	Introduction to sheet metal processes		
21	14/12/20	Sheet forming, Bending, drawing, Coining, embossing		
22	18/12/20	Cutting Process Like Punching, blanking, shearing		
23	19/12/20	Steps in metal casting & adv. of casting process.		
24	19/12/20	Pattern, Pattern materials & pattern allowances.		
25	26/12/20	Difference bet^n Pattern & casting, Moulding		
26	26/12/20	Moulding sand, mould making, cores & its types.		

Session 2020-21 (Odd sem.)

V th sem.

Teaching Plan

Subject Code: SMEO5   Open Elective – I

Subject Name: Manufacturing Techniques.

Lecture	Topic	Date	Unit
1	Overview of Manufacturing processes.	16/10/20	
2	Classification of mfg. processes.	17/10/20	
3	Selection of Mfg process.	23/10/20	
4	Types & Properties of materials	24/10/20	
5	Selection of proper material	24/10/20	
6	Introduction to Conventional & Non conv. m/c'ing	3/10/20	
7	Introduction to cutting type shaping processes 3/10/20		
8	Basic concept of metal cutting & Theory	6/11/20	
9	Types of cutting tool & materials	7/11/20	
10	Orthogonal & oblique cutting methods	7/11/20	
11	General purpose v/s special purpose m/cs.	20/11/20	
12	Introduction & applications of diff cutting opr.	21/11/20	
13	Discription about Turning & Lathe.	21/11/20	
14	Drilling operation & Boring operation.	27/11/20	
15	Milling operation & milling cutters	28/11/20	
16	Shaping & planning operations & differents	28/11/20	
17	Grinding processes, Grinding m/cs.	4/12/20	
18	Introduction to metal forming (sheet metal	5/12/20	
19	forging & Rolling processes with types	5/12/20	
20	Extrusion, wire drawing processes.	11/12/20	
21	Sheet bonding, drawing, coining, embossing	12/12/20	
22	Cutting processes punching, blanking, shearing, Lancing	12/12/20	
23	steps in metal casting processes.	18/12/20	
24	Adv. of Casting, Pattern, diff. bet" casting & Pattern	19/12/20	
25	Different Pattern materials & Pattern allowances.	19/12/20	
26	Moulding sand, sand mould making, cores	26/12/20	
27	Types of cores, casting defect cupola furnace	26/12/20	
28	Casting process & its applications.	1/1/21	
29	Joining Processes classification & types.	2/1/21	
30	Advantages & disadv. of riveting	2/1/21	
31	Soldering, Brazing & difference between them	8/1/21	
32	Electric arc welding & Gas welding processes	9/1/21	
33	Resistance welding & friction welding processes	9/1/21	

J.S.W.

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Name of Subject Teacher
Prof. V. V. Kale

Odd/Even Semester 2020-21)

Execution Plan, Open Elective-I

Name of Faculty:- V.V.Kale   Semester V th   Section: A/B/C   C

Subject Code: SMF05   Subject Name: Manufacturing Technique.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	01|01|21	Casting defects, Cupola furnace, casting applications	ﬞ	Online class
28	02|01|21	Joining processes with its types & classification	ﬞ	
29	02|01|21	Advantages & disadv. of riveting, soldering	ﬞ	
30	08|01|21	Brazing, Arc welding process its principle	ﬞ	
31	09|01|21	Gas welding process, Gas welding Flames	ﬞ	
32	09|01|21	Resistance welding, types, friction welding.	ﬞ	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R, Badnera

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21) Odd Sem.

Execution Plan, Open Elective-I

Name of Faculty:- V.V.Kale   Semester V^th   Section: A/B/C   [c]

Subject Code: 5ME05   Subject Name: Manufacturing Techniques.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	16/10/20	Overview of Manufacturing & classification of mfg. processes		
2	17/10/20	Types of of mfg processes like Casting, Rolling.		
3	17/10/20	Selection of manufacturing processes		
4	23/10/20	Properties of materials & its types, its selection		
5	24/10/20	Introduction to Conventional & Non conv. machining		
6	31/10/20	Introduction to cutting type shaping processes		
7	31/10/20	Basic concept & theory of metal cutting.		
8	06/11/20	Different types of cutting tools, classification		
9	07/11/20	Orthogonal & Oblique cutting processes.		Sign of
10	07/11/20	General purpose v/s special purpose m/cs.		HOD
11	20/11/20	Introduction & applications of metal cutting opern		
12	21/11/20	different opern's on Lathe, turning operation		
13	21/11/20	Introduction to drilling & boring operations		
14	27/11/20	Milling m/c & milling operations		On line class
15	28/11/20	Shaper & planer operations & different		
16	04/12/20	Grinding wheel contents & grinding operation.		
17	05/12/20	Introduction to metal &sheet forming operation.		
18	05/12/20	Introduction & types of forging & Rolling		
19	11/12/20	Extrusion & wire drawing process.		
20	12/12/20	Introduction to sheet metal processes		
21	14/12/20	Sheet forming, Bending, drawing, Joining, embossing		
22	18/12/20	Cutting Processes Like punching, blanking, shearing		
23	19/12/20	Steps in metal casting & adv. of casting process.		
24	19/12/20	Pattern, Pattern materials & pattern allowances.		
25	26/12/20	Difference bet^n pattern & casting, Moulding		
26	26/12/20	Moulding sand, mould making, cores & its types.		

LECTURE PLAN

Summer (WINTER SEMESTERS) (2020-21) dept.

SEMESTER : VI   CLASS : C   LECTURES PER WEEK : 4

NAME OF SUBJECT : CONTROL SYSTEM ENGINEERING

Lecture No.	Date	Topics to be covered
1	2·1·17	**UNIT - I** Types of control systems
2		Mathematical modelling of physical systems
3		Block diagram Reduction Method
4		Signal Flow Graph Method
5		Numericals on BDR and SFG methods
6		Analogy - Mechanical and Electrical Systems
7		**UNIT - II** Industrial controllers and their classification
8		Pneumatic proportional control system
9		Integral control system, proportional plus derivative control system
10		proportional plus derivative plus integral control system
11		Effects of control actions on system performance
12		Examples on industrial control systems
13		**UNIT - III** Transient Response Analysis
14		Time domain specifications, types of standard inputs
15		Responses to first order systems
16		Responses to second order systems
17		Steady state errors
18		Position, velocity and acceleration error constants
19		**UNIT - IV** System stability concept, s-plane
20		Routh's Stability Criteria, numericals
21		Root Locus Method, constructional steps of root locus
22		Numericals on root locus with simple roots
23		Numericals on root locus with complex roots
24		Numericals on root locus - practice problems
25		**UINIT - V** Frequency Response Analysis

1/2

[PROF. RAM MEGHE INSTITUTE OF TECHNOLOGY AND RESEARCH, BADNERA-AMRAVATI]

LECTURE PLAN (2020-21)

Summey **(WINTER SEMESTERS)** CSE (VI Sem)

Lecture No.	Date	Topics to be covered
26		Introduction to Bode Plot, contructional steps of bode plot
27		Numericals on bode plot with simple roots
28		Numericals on bode plot with simple roots
29		Numericals on bode plot with complex roots
30		Numericals on bode plot with complex roots
31		UNIT - VI Introduction to speed control systems
32		Fly ball governer speed control system, diesel engine control system
33		Speed control systems for machine tools
34		System generators - Field control D.C. motor systems
35		Armature control D.C. motor systems
36		Analysis of performance characteristics
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		

2/2 .

[PROF. RAM MEGHE INSTITUTE OF TECHNOLOGY AND RESEARCH, BADNERA-AMRAVATI]

Odd/Even Semester 2020-21)

even Execution Plan even sem

Name of Faculty:- Dr. M.P. Nawathe Semester VI   Section: A/B/C   C

Subject Code: 6ME03   Subject Name: Control System Engg.

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18.1.21	Introduction to control system	M	
2	19.1.21	open loop & closed loop system	M	
3	20.1.21	Types of open loop system	M	aline
4	21.1.21	Types of closed loop system	M	
5	25.1.21	Transfer function	M	
6	27.1.21	Block Dia.	M	
7	1.2.21	Prob. on Block Dia.	M	
8	2.2.21	prob on Block Dia.	M	
9	3.2.21	Signal flow graph (SFG)	M	
10	4.2.21	prob. on SFG.	M	
11	9.2.21	Types of controller	M	
12	10.2.21	prop. controller, Derivative	M	
13	11.2.21	integral controller	M	
14	16.2.21	PD controller	M	
15	17.2.21	PID controller	M	
16	18.2.21	Time response analysis of c.s.	M	
17	22.2.21	time response specifications.	M	
18	23.2.21	prob on time response	M	
19	25.2.21	introduction to Root locus	M	
20	1.3.21	prob. on Root Locus	M	
21	2.3.21	stability of control system	M	
22	3.3.21	prob. on stability.	M	
23	4.3.21	prob. on Root-locus.	M	
24	8.3.21	prob on Root locus	M	
25	9.3.21	prob on Root-locus	M	
26	10.3.21	prob. on stability	M	
27	3.5.21	prob on stability	M	
28	4.5.21	Rouths method	M	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- M.P. Nawathe   Semester VI   Section: A/B/C   C

Subject Code: 6ME03   Subject Name: CSE

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	5.5.21	Intrd. to Bode plot.	M	
30	6.5.21	PM, GM, WGC, WPC	M	
31	10.5.21	prob. on Bode plot	M	
32	11.5.21	prob on Bode plot	M	
33	12.5.21	system is stable or unstable	M	
34	13.5.21	checking stable or unstable	M	
35	17.5.21	T.F.ob. stream turbine	M	
36	18.5.21	T.F. of Gas turbine	M	
37	24.5.21	Block Dia. of diesel engine	M	
38	25.5.21	Block Dia. of flow control syst	M	
39	1.6.21	M.C.Q. unit No. 1 & 2	M	
40	2.6.21	M.C.Q unit No 2 & 3	M	
41	7.6.21	M.C.Q unit No. 4 & 5	M	

Dr. M.P. Narwarte

Teaching Plan (Sec A).

3ME02 Mechanics of Materials
III Semester Mechanical Engineering 2020-21

LN	Unit	Topic	Remarks
1.	I	Mechanical properties: Concept of direct, bending and shear stresses and strains	
2.		Stress-strain relations, Biaxial and triaxial loading	
3.		Elastic constants and their relationship	
4.		Stress-strain diagrams and their characteristics for mild steel, and other metals, factor of safety	
5.		Stresses and strains in compound bars in uniaxial tension and compression	
6.		Stresses and strains in compound bars in uniaxial tension and compression	
7.		Temperature stresses in simple restrained bars and compound bars of two metals only	
8.		Temperature stresses in simple restrained bars and compound bars of two metals only	
9.	II	Beams, loading and support conditions	
10.		Bending moment and shear force for all types of loadings for simply supported beams	
11.		Bending moment and shear force for all types of loadings for simply supported beams	
12.		Bending moment and shear force for all types of loadings for simply supported beams	
13.		Relation between shear force, bending moment and loading intensity	
14.		Theory of simple bending, section modulus	
15.		Moment of resistance	
16.		Bending stresses in solid, hollow and built up section, leaf springs	
17.	III	Theory of torsion & assumptions	
18.		Derivation of torsion equation, polar modulus	
19.		Stresses in solid & hollow circular shaft	
20.		Power transmitted by shaft	
21.		Closed coiled helical spring with axial load	
22.		Shear stress distribution on beam rectangular	
23.		Shear stress distribution on circular cross sections	
24.	IV	Thin and thick cylinders subjected to internal pressures	
25.		Thin and thick cylinders subjected to internal pressures	
26.		Thin spherical shells subjected to internal pressures	
27.		Thin spherical shells subjected to internal pressures	
28.	V	Strain energy under uniaxial tension and compression impact loads and instantaneous stresses	
29.		Strain energy under uniaxial tension and compression impact loads and instantaneous stresses	
30.		Strain energy under uniaxial tension and compression impact loads and instantaneous stresses	
31.		Biaxial stress system	
32.		Principal stresses, principal planes	
33.		Mohr's circle of stresses	
34.	VI	Deflection in statically determinate (simply supported) beams subjected to point loads	
35.		Deflection in statically determinate (simply supported) beams subjected to point loads	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- _M. P. Nawathe_   Semester _IIIrd_   Section: A/B/C   **A**

Subject Code: _3ME02_   Subject Name: _MoM_

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	27·10·20	Shear Stress Rectangular shaft	M	online
30	28·10·20	Principle planes	M	
31	2·11·20	Thin & thick cylinder	M	
32	3·11·20	Strain energy of impact Load	M	
33	4·11·20	Strain energy under Load	M	
34	9·11·20	Mohar's circle of stresses	M	
35	23·11·20	Deflection of Beam	M	
36	24·11·20	Deflection of beam with UDL	M	
37	25·11·20	Macauley's method (prob)	M	Sign of HOD

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Teaching Plan (First Session: 2020-21)

Name of Faculty: Dr H.M. Deshmukh   Semester: IV Section: C

Subject Code: 4ME01   Subject Name: Material Science
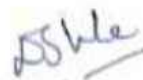
Lecture No.	Topics Covered	Unit No.
1	Introduction to process physical & mechanical metallurgy	Unit-I
2	Selection of material, crystal, crystal structures & systems, allotropy, polymorphism	Unit-I
3	Bravais lattices, Simple Cubic, BCC, FCC, HCP structures, Atomic Packing factor	Unit-I
4	Miller indices for crystallographic planes & directions	Unit-I
5	Miller indices for crystallographic planes & directions	Unit-I
6	Solid solution, its types, Hume Rothery rules.	Unit-I
7	Nucleation & Growth Solidification of metal in ingot mould. Gibbs phase rule	Unit-I
8	Cooling curves for Pure metal, Binary, Eutectic & Off-Eutectic Alloys	Unit-II
9	Phase or Equilibrium diag. Steps in plotting Phase diag. Lever rule	Unit-II
10	Micro-constituents, Phases & Critical temperatures on Fe-C diagram	Unit-II
11	Peritectic, Eutectic & Eutectoid reactions on Fe-C diagram	Unit-II
12	Cooling of alloys of iron & carbon with various compositions	Unit-II
13	Weight % calculation of micro-constituents & phases for various compositions of alloy of Fe & Carbon	Unit-II
14	Introduction to composite materials, advantages and applications.	Unit-II
15	Introduction to Heat treatment of steels Meaning & purpose of Heat treatment. Annealing & it's sub-types	Unit-V
16	Full Annealing, Normalizing, Introduction to Hardening process	Unit-V
17	Martensite transformation Retained austenite and sub-zero treatment Quenching media	Unit-V
18	Tempering- Low, Medium & High temp tempering, Introduction to TTT diagram	Unit-V
19	Super imposition of continuous cooling curves on S Curve Austempering.	Unit-V
20	Martempering and patenting pearlitetransformation	Unit-V
21	Bainite transformation Hardenability Jominy End Quench Test	Unit-V
22	Purpose of alloying, Classification of alloy steels, classification of alloying elements	Unit-III
23	Effect of alloying elements on eutectoid composition.	Unit-III
24	Effect of alloying elements on Eutectoid temperature, and on the S curve.	Unit-III
25	Alloying elements and their effect on properties of steels, Hadfield's Manganese steels, Ball Bearing Steels	Unit-III
26	HCHC steels Stainless steels- Ferritic, Austenitic & Martensitic SS. Weld Decay in SS	Unit-III
27	High Speed Steels, its heat treatment, Double & Triple Tempering	Unit-III

28	Cast irons : Factors governing condition of carbon in cast iron, Maurer's diagram,	Unit-IV
29	Solidification of white cast iron, Solidification of Grey cast iron, Constitution and properties of white cast iron	Unit-IV
30	Constitution and properties of gray cast iron, Nodular and Malleable cast irons, their applications	Unit-IV
31	Types, Properties and uses of Brasses and Bronzes	Unit-IV
32	Important alloys of Aluminum, Lead, Tin and Zinc, with their applications.	Unit-IV
33	Bearing materials, Season cracking, precipitation hardening.	Unit-IV
34	Methods of surface hardening: Carburizing, Nitriding, Cyaniding, Flame and Induction Hardening	Unit-VI
35	Hot and cold working, Relative advantages and disadvantages, study of stress strain curve, Luder's bands, Work hardening	Unit-VI
36	Strain Ageing, Recovery, Recrystallization and grain growth.Metallurgical factors affecting various Mechanical working processes,	Unit-VI
37	Preferred orientation, Deformation mechanisms-Slip& twining..	Unit-VI
38	Critical resolved shear stress, Concept, Methods of Manufacture of metal powders, compaction Process- Single die and double die,	Unit-VI
39	Sintering, stages of sintering, Manufacture of porous bearings & cemented carbide tip tools by P.M.T.	Unit-VI
40	Powder metallurgy(PM)- applications, advantages & limitations	Unit-VI

Subject Faculty
Department of Mechanical Engg
PRMIT&R, Badnera

Head,
Department of Mechanical Engg
PRMIT&R, Badnera

Execution Plan (First Session: 2020-21)

Name of Faculty: Dr H.M. Deshmukh   Semester: IV Section: C
Subject Code: 4ME01   Subject Name: Material Science
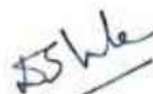
Lecture No	Date	Topics Covered	Unit No.
	08/03/2021	Health problem	
	09/03/2021	Health problem	
1	10/03/2021	Introduction to process physical & mechanical metallurgy	Unit-I
2	15/03/2021	Selection of material, crystal, crystal structures & systems, allotropy, polymorphism	Unit-I
3	16/03/2021	Bravais lattices, Simple Cubic, BCC, FCC, HCP structures, Atomic Packing factor	Unit-I
4	17/03/2021	Miller indices for crystallographic planes & directions	Unit-I
5	22/03/2021	Solid solution, its types, Hume Rothery rules, Nucleation & Growth	Unit-I
6	23/03/2021	Solidification of metal in ingot mould, Gibbs phase rule	Unit-I
7	24/03/2021	Cooling curves for Pure metal, Binary, Eutectic & Off-Eutectic Alloys	Unit-II
	29/03/2021	Holiday-Second Day of Holi	
8	30/03/2021	Phase or Equilibrium diag, Steps in plotting Phase diag, Lever rule	Unit-II
	31/03/2021	Enquiry Committee meeting at SGBAU	
	02/04/2021	Holiday- Good Friday	
9	05/04/2021	Micro-constituents, Phases & Critical temperatures on Fe-C diagram	Unit-II
10	06/04/2021	Peritectic, Eutectic & Eutectoid reactions on Fe-C diag	Unit-II
11	07/04/2021	Cooling of alloys of iron & carbon with various compositions	Unit-II
12	12/04/2021	Weight % calculation of micro-constituents & phases for various compositions of alloy of Fe & Carbon	Unit-II
	13/04/2021	Holiday- Gudi Padwa	
	14/04/2021	Holiday- Dr Babasaheb Ambedkar Jayanti	
13	19/04/2021	Introduction to composite materials, advantages and applications, Introduction to Heat treatment of steels	Unit-II Unit-V
14	20/04/2021	Meaning & purpose of Heat treatment, Annealing & it's sub-types	Unit-V
15	21/04/2021	Full Annealing, Normalizing, Introduction to Hardening process	Unit-V
	26/04/2021	**Common Test 1**	
	27/04/2021	**Common Test 1**	
	28/04/2021	**Common Test 1**	
	03/05/2021	**Preparation Leave University Exam**	
	04/05/2021	**Preparation Leave University Exam**	
	05/05/2021	**University Exam (III Semester)**	
	10//05/2021	**University Exam (III Semester)**	
	11/05/2021	**University Exam (III Semester)**	
	12/05/2021	**University Exam (III Semester)**	
	17/05/2021	**University Practical Exam (III Semester)**	
	18/05/2021	**University Practical Exam (III Semester)**	
	19/05/2021	**University Practical Exam (III Semester)**	

16	24/05/2021	Martensite transformation Retained austenite and sub-zero treatment Quenching media	Unit-V
17	25/05/2021	Tempering- Low, Medium & High temp tempering, Introduction to TTT diagram	Unit-V
	26/05/2021	**Holiday- Buddha Pournima**	
18	31/05/2021	Super imposition of continuous cooling curves on S Curve Austempering, Martempering and patenting pearlite, and bainite transformation Hardenability	Unit- V
19	01/06/2021	Purpose of alloying, Classification of alloy steels, classification of alloying elements. Effect of alloying elements on eutectoid composition,	Unit-III
20	02/06/2021	Effect of alloying elements on Eutectoid temperature, and on the S curve, alloying elements and their effect on properties of steels, Hadfield's Manganese steels, Ball Bearing Steels, HCHC steels	Unit-III
21	07/06/2021	Stainless steels- Ferritic, Austenitic & Martensitic SS, Weld Decay in SS, High Speed Steels, its heat treatment	Unit-III
22	08/06/2021	Cast irons : Factors governing condition of carbon in cast iron, Maurer's diagram,	Unit-IV
23	09/06/2021	Solidification of white cast iron, Solidification of Grey cast iron, Constitution and properties of white cast iron	Unit-IV
24	14/06/2021	Solidification of Grey cast iron, Constitution and properties of white, gray,	Unit-IV
25	15/06/2021	Nodular and Malleable cast irons, their applications Types, Properties and uses of Brasses and Bronzes	Unit-IV
26	16/06/2021	Important alloys of Aluminum, Lead, Tin and Zinc, with their applications.	Unit-IV
27	21/06/2021	Powder metallurgy(PM)- applications, advantages, metal production methods, process of PM	Unit-VI
28	22/06/2021	Sintering, stages of sintering, Manufacture of porous bearings & cemented carbide tip tools by P.M.T.	Unit-VI
29	23/06/2021	Hot and cold working, Relative advantages and disadvantages, study of stress strain curve, Luder's bands, Work hardening, strain Ageing	Unit-VI
30	28/06/2021	Strain Ageing; Recovery, Recrystallization and grain growth.Metallurgical factors affecting various Mechanical working processes,	Unit-VI
31	29/06/2021	Methods of surface hardening: Carburizing, Nitriding, Cyaniding, Flame and Induction Hardening	Unit-VI

Subject Faculty
Department of Mechanical Engg
PRMIT&R, Badnera

Head
Department of Mechanical Engg
PRMIT&R, Badnera

Session 2020-21,
(Even semester)

Teaching Plan

Manufacturing

Subject Code: 4ME03   Subject Name: Technology

Lecture	Topic	Date	Unit
1	Theory & Mechanics of metal cutting	21/1/21	
2	Tool materials & their properties	22/1/21	
3	Tool geometry & cutting tool classification	23/1/21	
4	Tool life & tool wear-types,	28/1/21	
5	Caclculations of cutting forces	29/1/21	
6.	Machinability & its importance	30/1/21	
7	cutting fluids, types & properties	4/2/21	
8	Chip thickness ratio & Merchant circle	5/12/21	
9	Construction & parts of centre lathe	6/2/21	
10	Operations of lathe, diff. operations	11/2/21	
11	Accessories of centre lathe	12/2/21	
12	Introduction Capstan & Turret Lathe	13/2/21	
13	Indexing & Bar feeding mechanism	18/2/21	
14	Machine tool classifications	20/2/21	
15	Taper turning operations & types	25/2/21	
16	Screw cutting operation on lathe	26/2/21	
17	Basic concept of CNC & applications	27/2/21	
18	Introduction & working principle of CNC turning	4/3/21	
19	Introduction to drilling & drilling operation	5/3/21	
20	Calculation of machining time for drilling	6/3/21	
21	Drilling m/cs general purpose & mass production	12/3/21	
22	Special purpose drilling m/cs.	13/3/21	
23	Introduction & types of boring	15/4/21	
24	Horizontal boring, Vertical boring m/c	16/4/21	
25	Jig boring m/c, Introduction to Broaching	17/4/21	
26	Broaching & its types, broach terminology etc.	22/4/21	
27	Introduction to milling & milling operations	23/4/21	
28	Calculations of machining time for milling	24/4/21	
29	Types of milling machines,	29/4/21	
30	Types of milling cutters,	30/4/21	
31	Dividing head compound & differential indexing	1/5/21	
32	Gear production & Gear producing m/cs.	6/5/21	
33	Introduction to Grinding,	7/5/21	

Name of Subject Teacher
(Prof. V. V. Kale)

2020-21
Even semester.

Teaching Plan

Subject Code: __4ME03__   Subject Name: __Manufacturing Technology.__

Lecture	Topic	Date	Unit
34	Grinding, rules & their working principle	8|5|21	
35	surface grinders & centreless grinders.	13|5|21	
36	Types of bonds, Abrasives, modification of Grwhl	14|5|21	
37	Study of various parts of shaper & operation	15|5|21	
38	Study of various parts of planer, sloter & optⁿ	20|5|21	
39	Introduction to Unconventional machining process	21|5|21	
40	study of Mechanical processes like Ultrasonic m/cing	22|5|21	
41	study of Abrasive & water jet machining	27|5|21	
42	Process parameters of all above processes.	28|5|21	
43	EBM, LBM principle & applications.	29|5|21	
44	PAM concept, generation of plasma Principle & applⁿ	31.5|21	
45	EDM Principle & parameters & applications.	4|6|21	
46	Die sinking, wire cut EDM mechanism of metal removal, process parameters advantages & applications.	5|6|21	

Name of Subject Teacher
(Prof V. V Kale)

Name of Faculty:- Dr. M. P. Nawathe Semester III rd   Section: A/B/C   [A]

Subject Code: 3ME02   Subject Name: Mechanics of Materials

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11.8.20	Introduction, Mech. prop. of material	M	
2	12.8.20	Concept of Stresses & strains	M	M
3	17.8.20	Biaxial & triaxial loading	M	
4	18.8.20	Elastic const. (prob).	M	
5	19.8.20	Stress-strain Dia. Factor of safty	M	
6	24.8.20	composite bar - prob	M	
7	25.8.20	composite bar - series	M	
8	31.8.20	Composite bar - parallel	M	
9	2.9.20	Temp. stresses	M	
10	7.9.20	Temp stresses prob	M	
11	8.9.20	Tem. stresses prob.	M	
12	9.9.20	B.M. & S.F. type of load & Beam	M	
13	14.9.20	simply supported beam pt load	M	
14	15.9.20	prob on simply supported beam	M	
15	16.9.20	Udl. simply supported beam	M	
16	21.9.20	Simply supported beam UDL	M	
17	22.9.20	prob. (udl)	M	
18	23.9.20	cantilever beam with pt Lod	M	
19	28.9.20	cantilever beam with UDL	M	
20	29.9.20	simple or pure Bending	M	
21	30.9.20	Section modulus & moment of Resi	M	
22	5.10.20	Leaf spring, Bending stresses	M	
23	6.10.20	Torsion of circular shaft	M	
24	7.10.20	Assumptions in simple bending	M	
25	19.10.20	Torsion of solid shaft	M	
26	20.10.20	Torsion of hollow shaft	M	
27	21.10.20	Power transmitted by shaft	M	
28	26.10.20	closed coiled spring	M	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21) Even

Execution Plan

Name of Faculty:- V.V.Kale   Semester IV th   Section: A/B/C | A |

Subject Code: ~~4ME03~~   Subject Name: Manufacturing Technology

4ME03

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21|1|21	Introduction about metal cutting, Mechanics of metal cutting	✓	
2	22|1|21	Tool materials, Single point cutting tool geometry.		
3	23|1|21	Cutting tools classification & geometry.		
4	28|1|21	Tool Life, Tool wear & its types		
5	29|1|21	Calculations of cutting tool forces.		
6	30|1|21	Machinability characteristics; Cutting fluids		
7	4|2|21	Chip thickness ratio derivation, types of chips		
8	5|2|21	Merchant circle drawing & explaination		
9	6|2|21	Construction & parts of Centre Lathe		
10	11|2|21	different operations performed on Lathe.		ROD
11	12|2|21	Accessories of centre lathe		
12	13|2|21	Introduction capstan & turret Lathe		
13	18|2|21	Indexing & bar feeding mechanism on turret		
14	20|2|21	Machine tool classification		
15	25|2|21	Taper turning methods & Screw cutting operation.		
16	26|2|21	Basic concept of CNC & Introduction of CNC		
17	27|2|21	Working principle of CNC with applications.		
18	4|3|21	CNC turning operation, steps involved.		
19	5|3|21	Drilling process principle & operation		
20	6|3|21	Parts of drilling machine, Gp drilling m/cs		
21	12|3|21	Mass production & special purpose drilling m/c		
22	13|3|21	~~coordinates~~ Radial drilling m/c & Pillar type drilling m/c		
23	15|3|21	Introduction & types of boring m/cs.		
24	16|4|21	Horizontal & Jig boring machine		
25	17|4|21	Introduction to broaching & broaching tool		
26	22|4|21	Types of broaching & broaching terminology		

Name of Faculty:- V. V. Kale **Semester** IVth **Section:** A/B/C [A]

Subject Code: 4ME03 **Subject Name:** Manufacturing Technology

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	23/4/21	Introduction to milling, types of milling methods	✓	
28	24/4/21	Calculations of machining time on milling.	✓	
29	29/4/21	Milling cutter terminology, Types of milling cutters	✓	
30	30/4/21	Dividing head, compound & differential indexing	✓	
31	1/5/21	Gear terminology, Gear producing m/cs	✓	
32	6/5/21	Gear production & Gear producing m/cs.	✓	
33	7/5/21	Introduction to Grinding & Grinding m/cs	✓	
34	8/5/21	Bench grinder, surface grinder	✓	
35	13/5/21	centreless grinders it merits & demerits	✓	Sign of
36	14/5/21	Grinding wheel types of bonds & Abrasive modification	✓	Online Class
37	15/5/21	Study of various parts shaper & Operations	✓	
38	20/5/21	Introduction & study of planer & sloter.	✓	
39	21/5/21	The difference betn Conventional & Non Conv. m/cing	✓	
40	22/5/21	Principle & operation of Mechanical process like Ultrasonic m/cing	✓	
41	27/5/21	Process parameter of Abrasive (water jet m/cing),	✓	
42	28/5/21	Study of thermal process like EBm, principle & appl	✓	
43	29/5/21	LBm applications & principle of working	✓	
44	3/6/21	PAm machining concept & generation of plasma, Principle & appl of PAm	✓	
45	4/6/21	Electro discharge machining principle & parameter.	✓	
46	5/6/21	Diesinking, wire cut EDm principle, advantages & appl.	✓	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

2020-21
Even semesters.

Teaching Plan

Subject Code: __4ME03__   Subject Name: __Manufacturing Technology.__

Lecture	Topic	Date	Unit
34	Grinding. mles & their working principle	8 5 21	
35	surface grinders & centreless grinders.	13 5 21	
36	Types of bonds, Abrasives, modification of GWheel	14 5 21	
37	Study of various parts of shaper & operation	15 5 21	
38	Study of various parts of planer, sloter & opr.	20 5 21	
39	Introduction to Unconventional machining process	21 5 21	
40	Study of Mechanical processes like Ultrasonic m/cing	22 5 21	
41	study of Abrasive & water jet maching	27 5 21	
42	Process parameters, of all above processes.	28 5 21	
43	EBM, LBM principle & applications.	29 5 21	
44	PArc concept, generation of plasma Principle & appl"	31.5 21	
45	EDM principle & parameters, & applications.	4 6 21	
46	Die sinking, wire cut - EDM mechanism of metal removal, process parameters, advantages & applications	5 6 21	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Name of Subject Teacher
(Prof V. V Kale)

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21) Even

Execution Plan

Name of Faculty:- V. V. Kale   Semester IV th   Section: A/B/C   A

Subject Code: 4ME03   Subject Name: Manufacturing Technology

4ME03

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21/1/21	Introduction about metal cutting, Mechanics of Metal cutting		
2	22/1/21	Tool materials, Single point cutting tool geometry.		
3	23/1/21	Cutting tools classification & geometry.		
4	28/1/21	Tool Life, Tool wear & its types		
5	29/1/21	Calculations of cutting tool forces.		
6	30/1/21	Machinability characteristics; Cutting fluids		
7	4/2/21	Chip thickness ratio derivation, types of chips		
8	5/2/21	Merchant circle drawing & explaination		
9	6/2/21	Construction & parts of Centre Lathe		
10	11/2/21	different operations performed on Lathe.		
11	12/2/21	Accessories of centre lathe		
12	13/2/21	Introduction capstan & turret lathe		no running class
13	18/2/21	Indexing & bar feeding mechanism on turret		
14	20/2/21	Machine tool classification		
15	25/2/21	Taper turning methods & Screw cutting operation.		
16	26/2/21	Basic concept of CNC & Introduction of CNC		
17	27/2/21	Working principle of CNC with applications.		
18	4/3/21	CNC turning operation, steps involved		
19	5/3/21	Drilling process principle & operation		
20	6/3/21	Parts of drilling machine, G.P. drilling m/cs		
21	12/3/21	Mass production & special purpose drilling m/c		
22	13/3/21	Radial drilling m/c & Pillar type drilling m/c		
23	15/3/21	Introduction & types of boring m/cs.		
24	16/4/21	Horizontal & Jig boring machine		
25	17/4/21	Introduction to broaching & broaching tool		
26	22/4/21	Types of broaching & broaching terminology		

Name of Faculty:- **V. V. Kale**   Semester **IV**th   Section: A/B/C   **A**

Subject Code: **4ME03**   Subject Name: **Manufacturing Technology**

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	23/4/21	Introduction to milling, types of milling Methods	✓	
28	24/4/21	Calculations of machining time on milling.	✓	
29	29/4/21	Milling cutter terminology, Types of milling cutters	✓	
30	30/4/21	Dividing head, compound & differential indexing	✓	
31	1/5/21	Gear terminology, Gear producing m/cs	✓	
32	6/5/21	Gear production & Gear producing m/cs.	✓	
33	7/5/21	Introduction to Grinding & Grinding m/cs	✓	
34	8/5/21	Bench grinder, surface grinder	✓	
35	13/5/21	centreless grinders it merits & demerits	✓	Sign of
36	14/5/21	Grinding wheel types of bonds & Abrasive modification	✓	Online Class
37	15/5/21	Study of various parts shaper & operations	✓	
38	20/5/21	Introduction & study of planer & sloter.	✓	
39	21/5/21	The difference betn Conventional & Non conv. m/cing	✓	
40	22/5/21	Principle & operation of Mechanical process like Ultrasonic m/cing	✓	
41	27/5/21	Process parameter of Abrasive (water jet m/cing,	✓	
42	28/5/21	Study of thermal process like EBm principle & appl	✓	
43	29/5/21	LBm applications & principle of working	✓	
44	3/6/21	PAm machining concept & generation of plasma, principle & appl (arc of PAm)	✓	
45	4/6/21	Electro discharge machining principle & parameter.	✓	
46	5/6/21	Diesinking, wire cut EDM principle, advantages & appl.	✓	

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Teaching plan

Vth Sem.B.E.Mechnical Engg.

Subject-Measurment system

Dr N. M.Wankhed
Sec. B

L.N.	Unit no.	Topics	Remarks
1		Generalised measurement system	
2		Significance of M.S. and applications	
3	I	Types of measuring instruments	
4		General configuration and functional elements	
5		Types of inputs	
6		Various methods for correction of inputs	
7		Static characteristics	
8		Different types of errors	
9		Combination of errors in overall systems	
10		Dynamic characteristics	
11		General mathematical model	
12	II	Zero order instrument with ex.	
13		First order instrument with ex.	
14		Second order instrument with ex.	
15		Response of first and second order instruments	
16		Introduction to step, ramp, fcy. And impulse inputs	
17		Types of strain gauges	
18		Strain gauge ckts.	
19		Numerical problems on strain gauges	
20	III	Use of strain gauge, selection etc.	
21		Basic methods of pr.measurements	
22		Manometer, bridgeman type, draph etc.	
23		Low pr.measurements-M/C Leod,Knudsen gauge	
24		Ionisation, thermal conductivity etc	
25		Force measurements-Mech.,hydraulic	
26		Pneumatic and electrical methods	
27		Torque and power measurement	
28		Various mech.,hydraulic and electrical methods	
29	IV	Numerical problems	
30		Flow measurements- Venturi,orifice	
31		Rotameter.pitot static tube	
32		Turbine and electromagnetic flow meter etc	
33		Temperature measurements- stds,various devices	
34	V	Bimetalic strip, liquid in glass thermometers	
35		Pr.thermometers,thermocouples	
36		Resistance thermometers,thermistors etc	
37		Liquid level measurements-Single float	
38		Force transducer,bubbler systems	

39		Capacitive variation types	
40		Resistance variation and radioisotpe	
41		Speed measurements- various mechanical types	
42		Electrical types	
43		Stroboscope, Vibration measurements- types	
44	VI	Seismic,strain gauge	
45		Pizoelectric accelerometers	
46		LVDT,LDR	
47		Capacitive pick ups	
48		Inductive pick ups	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)
Execution Plan

Name of Faculty:- Dr. N. W. Kale _____ Semester VII   Section: A/B/C   B

Subject Code: 7ME02 _____ Subject Name: Energy Conversion II

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19/8/2020	Unit III Nuclear Power - Indian and world Scenario - review.		
2	21/8/20	Basics of Nuclear energy		
3	4/8/20	Basics of Nuclear energy		
4	27/8/20	Components & their role of N. reactor.		
5	28/8/20	Types of nuclear reactor - BWR		
6	29/6/20	—//— Pressurised water reactor		
7	2/9/2020	—//— CANDU reactor.		
8	3/9/20	—//— Gas cooled N. reactor.		
9	4/9/20	Unit V .. Renewable energy Sources Indian Scenario		Sign
10	5/9/20	Solar thermal energy systems		
11	9/9/20	Solar photovoltaic systems		
12	10/9/20	Wind energy - intro - Types - Adv/limits		
13	11/09/20	Biogas plants - Types - review		
14	12/09/20	other Biomass energy Resources.		
15	16/09/20	Unit I - Reciprocating compressor - classn, Uses etc.		
16	18/9/20	Methods of compressing gases		
17	19/9/20	Simple reciprocating compressor		
18	23/9/20	Compressor with clearance volume.		
19	24/9/20	Methods of improving efficiency		
20	25/9/20	Multi staging and intercooling		
21	26/9/20	Concept of aftercooling		
22	30/9/20	Numericals on reciprocating comp.		
23	7/10/2020	Unit II classification of rotary devices		
24	8/10/20	Fans - Blowers & Compressors. -		
25	9/10/20	Vane Blower. - construction-working - applen		
26	10/10/20	Roots Blower - construction-working-applen		

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Dr. Nitin A. Wakhode   Semester V   Section: A/B/C   B

Subject Code: 5ME04   Subject Name: Measurement system

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	12/8/20	Generalised measurement system		online
2	13/8/20	significance of M.S. & Application		Lectures
3	16/9/20	Types of measuring instruments		
4	19/9/20	General configuration & functional elemts.		
5	21/8/20	Types of inputs,		
6	27/8/20	Various methods for corrections of input		
7	28/8/20	Static characterstics		
8	29/8/20	Different types of errors		
9	2/9/20	Combination of errors in overall sys.		
10	3/9/20	Dynamic characteristics		
11	4/9/20	General mathematical model		
12	5/9/20	Zero order instrument with ex.		
13	9/9/20	first order instrument with ex.		
14	11/9/20	Second order instrument with ex.		
15	12/9/20	response of first & second order		
16	16/9/20	instru. to step, ramp, fcy & impulse inputs		
17	18/9/20	Types of strain gauges		
18	19/9/20	Strain gauge ckts		
19	23/9/20	Numerical problems on strain gauge		
20	25/9/20	Use of strain gauge, selection etc.		
21	26/9/20	Basic methods of pr. measurements		
22	7/10/20	re manometer, bridgeman type, dead etc.		
23	8/10/20	Low pr. measurements - Mcleod, Knudsen gage		
24	9/10/20	Ionisation, Thermal conductivity etc.		
25	22/10/20	Force measurements - Mech. Hydraulic		
26	23/10/20	pneumatic & electrical methods		

Session 2020-21,
(Even semester)

Teaching Plan

Manufacturing

Subject Code: 4ME03   Subject Name: Technology

Lecture	Topic	Date	Unit
1	Theory & Mechanics of metal cutting	21/1/21	
2	Tool materials & their properties	22/1/21	
3	Tool geometry & cutting tool classification	23/1/21	
4	Tool life & tool wear-types,	28/1/21	
5	Caclculations of cutting forces	29/1/21	
6.	Machinability & its importance	30/1/21	
7	cutting fluids, types & properties	4/2/21	
8	Chip thickness ratio & Merchant circle	5/2/21	
9	Construction & parts of centre lathe	6/2/21	
10	Operations of lathe, diff. operations	11/2/21	
11	Accessories of centre lathe	12/2/21	
12	Introduction Capstan & Turret Lathe	13/2/21	
13	Indexing & Bar feeding mechanism	18/2/21	
14	Machine tool classifications	20/2/21	
15	Taper turning operations & types	25/2/21	
16	Screw cutting operation on lathe	26/2/21	
17	Basic concept of CNC & applications	27/2/21	
18	Introduction & working principle of CNC turning	4/3/21	
19	Introduction to drilling & drilling operation.	5/3/21	
20	Calculation of machining time for drilling	6/3/21	
21	Drilling m/cs general purpose & mass production	12/3/21	
22	special purpose drilling m/cs.	13/3/21	
23	Introduction & types of boring	15/4/21	
24	Horizontal boring, vertical boring m/c	16/4/21	
25	Jig boring m/c, Introduction to Broaching	17/4/21	
26	Broaching & its types, broach terminology etc.	22/4/21	
27	Introduction to milling & milling operations	23/4/21	
28	Calculations of machining time for milling	24/4/21	
29	Types of milling machines,	29/4/21	
30	Types of milling cutters,	30/4/21	
31	Dividing head compound & differential indexing	1/5/21	
32	Gear production & Gear producing m/cs.	6/5/21	
33	Introduction to Grinding,	7/5/21	

Name of Subject Teacher
(Prof. V. V. Kale)

Execution Plan

Name of Faculty:- Dr Nitin A Wankhade   Semester V   Section: A/B/C | B |

Subject Code: SME04   Subject Name: Measurement system

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	24/10/20	Torque & power measurement i.e.	✗	Online
28	28/10/20	Various mech. hydraulic & electric method.	✗	Lectures
29	4/11/20	Numerical problems.	✗	
30	5/11/20	Flow measurement:- Venturi, orifice	✗	
31	6/11/20	Rotameter, pitot static tube	✗	
32	25/11/20	turbine & electromagnetic flow meter etc.	✗	
33	26/11/20	Temp. measurements - stds, various devices	✗	
34	2/12/20	Bimetallic strip, liq. in glass thermo.	✗	
35	4/12/20	pr. Thermometers, thermocouples.	✗	
36	5/12/20	resistance thermometer, thermistors etc	✗	
37	9/12/20	Liquid level measurements - single float	✗	
38	10/12/20	Force transducer, bubbler systems.	✗	
39	11/12/20	Capacitance variation types	✗	
40	12/12/20	Resistance variation & Radioisotope	✗	
41	16/12/20	Speed measurements - various mech.	✗	
42	17/12/20	types, electrical types,	✗	
43	18/12/20	Stroboscope, vibration measurement types	✗	
44	19/12/20	i.e. seismic, strain gauge,	✗	
45	23/12/20	pizoelectric accelerometers	✗	
46	24/12/20	Linear variable differential transducer, LVDT	✗	
47	26/12/20	Capacitive pick ups	✗	
48	30/12/20	Inductive pick ups.	✗	

AS

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

Teaching plan

IVth Sem.B.E.Mechnical Engg.

Subject-Manufacturing Technology

Pr N.A.Wankhade
sec-B

L.N.	Unit no.	Topics	Remarks
1		Theory of metal cutting, mechanics	
2		Tool material, tool geometry	
3		Tool geometry, classification	
4	I	Tool life and wear	
5		Calculation of cutting forces	
6		Machinability, cutting fluid	
7		Chip thickness ratio	
8		Merchant circle	
9		Introducion of contruction and parts of centre lathe	
10		Introduction to operation and accessories of centre lathe	
11		Introduction to capstan and turret lathe	
12		Indexing mechanism, bar feeding mechanism	
13	II	Machine tool classification	
14		Numerical approach	
15		Taper turning and screw cutting	
16		Basic concept of CNC-Introduction	
17		Working principle	
18		CNC Turning operation	
19		Drilling operation-General purpose	
20		Mass production	
21		Special purpose drilling machine	
22	III	---------------//-------------//------------	
23		Introduction to boring machine and types	
24		Harrizontal, vertical and jig boring machine	
25		Intro. to broaching machine	
26		Types and terminology	
27		Calculation of machining time for milling	
28		Milling machine-Types, types of cutters	
29	IV	Dividing head, compound	
30		Differential indexing	
31		Gear producing machine	
32		Types of machines	
33		Grinding machines-bench grinder	
34		Surface grinders, centreless grinders	
35	V	Types of bonds and abrasives	
36		Study of various parts of shaper	
37		Study of various parts of planer	

38		Study of various parts of slotter	
39		Unconventional machining processes – Introduction	
40		Mehanical processes- Ultrosonic machining	
41		Principle, application,process parameters etc.	
42	VI	Thermal processes – EBM	
43		LBM,PAM – principles ,applications etc	
44		LBM,PAM – principles ,applications etc	
45		EDM – parameters, principles	
46		Applications, material removal process etc.	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering
(Odd/Even Semester 2020-21)
Execution Plan

Name of Faculty:- Dr. Nitin A. Wankhade Semester Ⅳ Section: A/B/C [B]

Subject Code: 4ME03 Subject Name: Manufacturing Technology

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	21/01/21	Th. of metal cutting, Mechanisms	✗	Online
2	22/01/21	Tool material, Tool geometry	✗	Lectures
3	23/01/21	Tool geometry, classification.		
4	28/01/21	Tool life & wear		
5	29/01/21	Calculation of cutting forces.		
6	30/01/21	Machinability, cutting fluid		
7	4/2/21	Chip thickness ratio		
8	5/2/21	Merchant circle		
9	6/2/21	Construction, operation & accessories of		
10	11/2/21	centre lathe		
11	12/2/21	Introduction of capstan & turret lathe		
12	13/2/21	indexing mechanism, bar feeding mech.		
13	18/2/21	M/c tool classification		
14	20/2/21	Numerical approach		
15	25/2/21	Taper turning & screw cutting		
16	26/2/21	basic concept of CNC - Introdn		
17	27/2/21	Working principle		
18	4/3/21	CNC turning operation		
19	5/3/21	Drilling operation - General purpose		
20	6/3/21	Mass production		
21	12/3/21	special purpose drilling m/cs		
22	15/4/21	—" — " — " —		
23	16/4/21	Introduction of boring m/cs & types		
24	17/4/21	Horizontal, vertical & jig boring m/c		
25	22/4/21	Introduction of broaching m/cs		
26	23/4/21	Types & Terminology		

Execution Plan

Name of Faculty:- Dr Nith A-Walankhade Semester IV   Section: A/B/C   B

Subject Code: 4ME03   Subject Name: Manufacturing Technology

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	24/6/21	Calculation of Mlching time for milling		Online
28	29/6/21	Milling Mlcs - Types, Types of cutters		Lectures
29	6/5/21	Dividing head, compound &		
30	7/5/21	differential indexing		
31	8/5/21	Gear producing Mlc		
32	12/5/21	Types of Mlcs.		
33	14/5/21	Grinding Mlcs - Bench grinders		
34	15/5/21	Surface grinder, centreless grinder		
35	20/5/21	Types of bonds & Abrasives		
36	21/5/21	Study of various parts of Shaper		
37	22/5/21	— '' — '' — Planner —		
38	27/5/21	— '' — '' — Slotter —		
39	29/5/21	Unconventional Mlching processes		
40	29/5/21	Mech. processes - Ultrasonic Mlcing		
41	3/6/21	principle, app^n, process parameters etc.		
42	4/6/21	Thermal processes — EBM		
43	5/6/21	LBM, PAM — principles,		
44	10/6/21	applications etc		
45	11/6/21	EDM — parameters, principle,		
46	12/6/21	applications, mat removal processetc.		

Head

Deptt. of Mechanical Engineering

P.R.M.I.T & R. Badnera

Teaching Plan 7ME02-Energy Conversion-II

Lecture no.	Unit No.	Topic to be covered
1.		Reciprocating Air Compressors:- Industrial uses of compressed air, Construction and working.
2.		Methods of compression and efficiencies of compression,
3.		Methods of reducing losses during compression single and multi-staging of compressors,
4.		clearance volume and its effect on work done and volumetric efficiency.
5.	I	condition for minimum work in two stage compression.
6.		Intercooling and its effects. Overall, isothermal and adiabatic efficiencies.
7.		IHP,BHP, requirements and after cooler
8.		Numericals
9.		Rotary compressors:- Comparison between reciprocating and rotary compressors, difference between fans, blowers and compressors,
10.		General equations for rotary machines.
11.		Vane. Roots blower, construction, working and velocity diagrams of centrifugal and axial flow compressors.
12.		
13.		Performance characteristics of blowers and compressors
14.		Numericals
15.	II	Numericals
16.		Definitions, classifications of refrigeration system; vapour compression refrigeration,
17.		Analysis of simple saturated vapor compression cycle, representation on T-s, Ph diagrams, Numericals
18.		vapour absorption refrigeration based on solar and waste heat recovery.
19.	III	Air refrigeration. Bell-colman cycle, reversed carnnot cycle. reversed Brayton cycle. Need for CFC free refrigerants.
20.		Numericals
21.		Air conditioning:- Definitions. classification and applications. Psychrometric properties. psychrometric charts elementary treatment with simple problems.
22.		Numericals
23.		Classification of gas turbines, construction and workng Gas turbine ideal and actual cycles constant volume, constant pressure, (Open and closed) cycle analysis..
24.		Regeneration & Numericals on it.

25.		Inter cooling & Numerical on it.
26.	IV	reheating application & Numerical on it.
27.		Optimum and maximum presure ratios, work ratios. Performance characteristics.
28.		Numericals on topic covered.
29.		Numerical on Combination of regeneration ,Inter cooling &reheating.
30.		Fields of application of gas turbine power plant. Introduction to jet propulsion, Ram jet, turbo jet
31.		Introduction :- Renewable & Nonrenewable sources. Solar Radiation :- Solar constant. basic earth-sun angles. Spectral distribution of extra terrestrial radiations & its variation.
32.		Different types of collectors
33.		Wind Power:- Wind speed data, power in the wind, wind power development, types of wind mills, application for pumping and power generation.
34.	V	generation. Biomass Energy Resources : Mechanism of green plant photosynthesis. efficienev of conversion, solar energy plantation.
35.		biogas – Types of biogas plants, factors affecting production rates. Pyrolysis. Gasifiess :
36.		Different types of Biogas plants
37.		Numericals on related topics
38.		NUCLEAR POWER : Fusion, fission,Chain reaction, Different nuclear fuels.
39.		conversion and breeding in nuclear fission.
40.		Classification and working of different reactors CANDU reactor.
41.		components of reactor, coolants, moderators etc.
42.		Different type of reactors such as boiling water,
43.		pressurized water Reactor
44.	VI	gas cooled Reactor
45.		liquidised metal cooled thermal reactors.

Execution Plan

Name of Faculty:-_____ Semester____ Section: A/B/C

Subject Code: _____ Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	23/10/20	Centrifugal Compressor & Blowers		
28	24/10/20	General equation - Eulers & SFEE		
29	4/11/20	surging - chocking.		
30	6/11/20	Axial flow Blowers/Compressors		
31	7/11/20	Unit III Refrigeration → meaning - Introduction Thermodynamics		
32	20/11/20	Air refrigeration system		
33	21/11/20	Numericals		
34	25/11/20	Vapour compression ref. system.		
35	26/11/20	Ph-TS & PV diagrams - analysis		
36	27/11/20	Numerics		
37	28/11/20	vapour absorption system.		
38	31/11/20	Introduction to Air condition.		
39	2/12/2020	Psychrometric process		
40	3/12/20	Unit IV Gas Turbines - Intro-Classification		
41	4/12/20	equations for efficiency - work ratio	yes	
42	5/12/20	Performance improvent of G.T.	yes	
43	9/12/20	Numericals on regeneration-reheating-int.	yes	
44	10/12/20	Jet propulsion - ramjet - Turbojet	yes	
		———x——x Total 44 Closed		

Subject: I C ENGINES   Semester: VIII   Subject Code: 8ME03

Lecture No	Unit	Topic Covered	Remark
1	I	Basic of I.C.Engines.	
2		Details of two stroke and four stroke engines.	
3		Air standard cycles.	
4		Fuel air cycle.	
5		Actual cycle.	
6		Variation in specific heat, Dissociation and their effect on engine performance.	
7	II	Review of other losses in IC engines.	
8		Conventional fuels for IC engines.	
9		Requirement, properties, fuel additive, limitations of fossil fuels.	
10		Review of various alternative/non-conventional fuels.	
11		Studies of fuel injection systems.	
12		Fuel pump and its working.	
13		Different types of fuel feed systems.	
14		Studies of injectors nozzles.	
15		Bosch type fuel pump.	
16	III	Combustion in SI engines.	
17		Stages of combustion.	
18		Factors influencing various stages.	
19		Normal & abnormal combustion. Detonation,	
20		Effect of detonation. Octane rating of fuel.	
21		Requirement of combustion chambers for SI engines.	
22		Important types of combustion chambers for SI engines.	
23		Relative advantages and disadvantages and application.	
24	IV	Combustion in CI engines.	
25		Stages of combustion in CI Engines	
26		Delay period, factor affecting delay period.	
27		Diesel knock, cetane rating.	
28		Requirements of combustion chamber for CI Engines.	
29		Methods of generating turbulence in combustion chamber.	
30		Combustion chambers for CI Engies.	
31		Types of combustion chambers for CI Engies.	
32	V	Evaluation of various performance parameters of IC Engines.	
33		Heat balance sheet.	
34		Heat balance sheet calculation.	
35		Excess air calculation.	
36		Methods of determination of friction power.	
37		Friction power calculations.	
38		Supercharging: Basic principles, objectives.	
39		Arrangements for super charging, advantages and limitations.	
40	VI	Emission from IC Engines .	
41		Review, their effect on human health.	
42		Cause of formation and approaches to control this pollutants.	
43		Study of BIS, EURO emission norms.	
44		IC Engines: Recent trends: Microprocessor based engines.	
45		Multi-point fuel injection engines.	
46		Common rail direct injections engines.	
47		Variable valve timing engines.	

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- N W Kdlp

Subject Code: 8SME 02   Semester VIII   Section: A/B/C   B

Subject Name: I.C. Engines

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
		Unit I		
1	20/1/21	I.C. Engines - Introduction		
2	27/1/21	I.C. Engines - 2-stroke - 4-stroke		
3	1/2/21	Air standard cycles - Review		
4	2/2/21	— // — — // —		
5	3/2/21	Fuel-air cycle - variation in sp. heat		
6	4/2/21	— // — Dissociation		
7	8/2/21	Actual cycle - study of other losses		
8	9/2/21	— // — — // —		
9	10/2/21	Unit II Introduction to IC engines fuel		
10	15/2/21	Reviews of various New fuels N SI		
11	16/2/21	Review of New fuels for SF engine		
12	17/2/21	Review of new fuels for CI engine		
13	22/2/21	Fuel feed system for SI & CI engine		
14	23/4/21	study of Bosch fuel pump		
15	24/4/21	Study of various nozzles		
16	25/4/21	Unit III Intro, combustion in SI engine		
17	1/3/21	detailed study - stages of combustion		
18	2/3/21	factors affecting various stages		
19	3/3/21	factors affecting various stages		
20	8/3/21	Abnormal combustion in SI engine		
21	9/3/21	octane rating of fuels		
22	10/3/21	combustion chambers for SF engines		
23	12/4/21	Unit IV Introduction: Combustion in CI engine		
24	15/4/21	study: stages of combustion in CI engine		
25	19/4/21	Detailed study of delay period, Factors		
26	20/4/21	Abnormal combustion in CI engine		
		cetane rating of CI engine fuels		

Execution Plan

Name of Faculty:-_____ Semester____   Section: A/B/C

Subject Code: _____   Subject Name: _____

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
27	22/4/21	Combustion chambes for C I engines		
28	26/4/21	Method of generation scutrol.		
29	28/4/21	combustn chambers for DI engns		
30	29/4/21	Combustn chambers for IDI eg		
31	3/5/21	Unit V Various Performace parameters		
32	4/5/21	Evaluction of basic Parauters IP, BP, bSFC		
33	5/5/21	Evaluation Heat balance sheet.		
34	6/5/21	Numericals on porforrane testing		
35	10/5/21	Numericals on performace testing		
36	11/5/21	supercharging - Aims - advortags. limit		
37	12/5/21	supurchargng types - Limitations		
38	13/05/21	Unit VI Review of emissions for IEEngin		
39	17/5/21	Mechanisou of formation, effects etc - CO		
40	18/5/21	----//---- HC		
41	19/5/21	----//---- Nox		
42	20/5/21	Review of EURO and BS Norms		
43	24/5/21	Methods of Emission control		
44	25/5/21	IC Engine recent trends -		
45	27/5/21	computr controlled Engins - VVT Engins-		
46	1/6/21	CRDI engines		
		Total 46 Classes		

Head
Deptt. of Mechanical Engineering
P.R.M.I.T & R. Badnera

Lecture no.	Unit No.	Topic covered(Description)
		Prof. Ram Meghe Institute of Technology & Research , Badnera.
		Department of Mechanical Engineering

Semester –IV		Subject Teacher: Prof. P.B. Jawanjal
	Teaching Plan -Energy Conversion -I	

Lecture no.	Unit No.	Topic covered(Description)
..	I	Flow diagram for steam power plant with basic units such as steam generator, turbine, condenser and pump.
2.		Introduction to water tube boilers used in thermal power Plants.
3.		Fire Tube boilers
4.		High pressure boilers; Loeffler, Benson, Lamont Boilers.
5.		Boiler mountings —devices for improving Boiler efficiency.
6.		Boiler accessories—devices for improving Boiler efficiency.
7.		Principle of fluidized bed combustion, Concept of Cogeneration.
8.	II	Boiler draught; Types of draught.
9.		Expression for diameter & height of chimney, condition for maximum discharge,
10.		Efficiency of chimney, reasons for draught loss.
11.		Boiler rating, boiler power, equivalent evaporation, efficiency
12.		Effect of accessories on boiler efficiancy and heat balance.
13.		Numericals on boilers and Heat balance sheet for boilers
14.		Numericals on boilers and Heat balance sheet for boilers
15.	III	CONDENSERS : Need,Types of condensers, quantity of cooling water required.
16.		Dalton's law of partial pressure, conaer.ser and vacuum effi :iency. Sources of air in condensers and its effect on performance.
17.		Condensate pump and air extraction pumps, air enjectors Cooling water system
18.		cooling ponds, spray tanks, cooling towers:
19.		Steam nozzles : Flow of steam through nozzles & diffusers, Maximum discharge, critical pressure ratio
20.		Effect of friction. Determination of throat & exit areas
21.		Nozzle efficiency,Numericals
22.		Numericals ,concept of super saturated flow & wilson line
23.	IV	Steam Turbines:- Principle of working, Types of steam turbines such as impulse, reaction, axial & radial flow, back pressure & condensing turbines. Compounding
24.		Reheat,regenerative cycles, blade. Analysis limited to two stages only. Analysis of steam Turbines : Flow of steam through impulse & impulse reaction turbine blading
25.		Velocity diagrams, Graphical & analytical methods for work & power developed
26.		Height of turbine blades & Numericals ,axial thrust and

		efficiency,Numricals
27.		LOSSES IN STEAM TURBINES:- Nozzle losses:- blade friction, partial admission, disc friction, gland leakage losses and velocity losses.
28.		Governing of steam turbines.
29.		Numericals
30.		NUCLEAR POWER : Fusion, fission,Chain reaction, Different nuclear fuels.
31.		conversion and breeding in nuclear fission,
32.		Classification and working of different reactors CANDU reactor.
33.		components of reactor, coolants, moderators etc.
34.		Different type of reactors such as boiling water,
35.	V	pressurized water Reactor
36.		gas cooled Reactor
37.		Introduction :- Renewable & Nonrenewable sources. Solar Radiation :- Solar constant, basic earth-sun angles
38.		. Spectral distribution of extra terrestrial radiations & its variation.
39.		Different types of collectors
40.		Wind Power:- Wind speed data, power in the wind, wind power development, types of wind mills, application for pumping and power generation.
41.	VI	generation. Biomass Energy Resources : Mechanism of green plant photosynthesis. efficienev of conversion, solar energy plantation,
42.		biogas – Types of biogas plants, factors affecting production rates. Pyrolysis, Gasifiess :
43.		MHD generator & Fuell cell.

Execution Plan –EC-1

Execution Plan

Name of Faculty:- Prof. P. B. Jawanjal Semester IV th   Section: A/B/C

Subject Code: 4ME62   Subject Name: EC-I (Even sem)   C

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	18/1/21	Steam power plant flow diagram & basics		
2	19/1/21	Different types of water tube boilers		
3	20/1/21	Different types of fire tube boilers		
4	21/1/21	High pressure boilers		
5	27/1/21	Boiler mountings		
6	27/1/21	Boiler accessories		
7	1/2/21	Fluidized bed boiler & concept of Cogenration		
8	2/2/21	Boiler draught & its types		
9	3/2/21	Expression for chimney ht. & diameter		
10	4/2/21	Condi for maxm discharge & efficiency		
11	8/2/21	Boiler rating, power, equilent evapor		
12	9/2/21	Boiler efficiency & heat balance		
13	10/2/21	Numerical on Boiler efficiency etc		
14	11/2/21	Numerical on heat balance sheet		
15	15/2/21	Condenser & its need, types		
16	16/2/21	Daltons law, cooling water derivation		
17	17/2/21	Condenser & vaccum efficiency		
18	18/2/21	Condensate extract pump, cooling tower		
19	22/2/21	Steam nozzle & diffuser		
20	23/2/21	Maximum discharge eqn & effect of fric n		
21	24/2/21	Nozzle efficiency & Numericals		
22	25/2/21	Super saturated flow, wilson line, Numerical		
23	01/3/21	Steam turbine, types & Working		
24	02/3/21	different compounding methods.		
25	03/3/21	Reheat & regeneratine cycles.		
26	04/3/21	Velocity diagram & work power develpm		
27	08/3/21	Calculation of blade dimensions.		
28	09/3/21	Numericals		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. P. B. Jawanj   Semester 4th   Section: A/B/C ✓   C

Subject Code: 4 ME 02   Subject Name: E.C-I

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	10/3/21	Numerial & Governing of steam turbine	PB	
30	15/3/21	Losses in steam turbine & Numerial	PB	
31	16/3/21	Numericals on topics covered	PB	
32	17/3/21	Introduction to Nuclear power & fuel	PB	
33	18/3/21	& Different Nuclear reactions	PB	
34	22/3/21	Conversion & breeding in nuclear fission	PB	
35	23/3/21	CANDU reactor, BWR	PB	
36	24/3/21	PWR, Gas cooled reactor etc	PB	
37	25/3/21	Renewable & Non renewable sources	PB	
38	30/3/21	Solar energy - solar radiation	PB	
39	01/4/21	Solar constant, basic earth sun angle	PB	
40	05/4/21	Different types of Collectors	PB	
41	6/4/21	Wind energy.	PB	
42	7/4/21	Different types of wind mills	PB	
43	8/4/21	Biomass energy resources	PB	
44	12/4/21	Biogas & different types of B. Plant	PB	
45	15/4/21	MHD & Fuel cell		

Head

Deptt. of Mechanical Engineering
P.R.M.I.T & R Badnera

Prof. Ram Meghe Institute of Technology & Research , Badnera. Department of Mechanical Engineering		
Semester –VII		Subject Teacher: Prof. P.B. Jawanjal
Teaching Plan -Energy Conversion-II		
Lecture no.	Unit No.	Topic covered(Description)
1.	I	. Reciprocating Air Compressors:- Industrial uses of compressed air, Construction and working.
2.		Methods of compression and efficiencies of compression,
3.		Methods of reducing losses during compression single and multistaging of compressors,
4.		clearance volume and its effect on work done and volumetric efficiency,
5.		condition for minimum work in two stage compression,
6.		Intercooling and its effects. Overall, isothermal and adiabatie efficiencies,
7.		IHP,BHP, requirements and after cooler
8.		Numericals
9.	II	Rotary compressors:- Comparison between reciprocating and rotary compressors, difference between fans, blowers and compressors,
10.		General equations for rotary machines.
11.		Vane, Roots blower, construction, working and
12.		velocity diagrams of centrifugal and axial flow compressors.
13.		Performance characteristics of blowers and compressors
14.		Numericals
15.		Numericals
16.	III	Definitions, classifications of refrigeration system; vapour compression refrigeration,
17.		Analysis of simple saturated vapor compression cycle, representation on T-s, Ph diagrams, Numericals
18.		vapour absorption refrigeration based on solar and waste heat recovery.
19.		Air refrigeration, Bell-colman cycle, reversed carnnot cycle, reversed Brayton cycle. Need for CFC free refrigerants.
20.		Numericals

21.		Air conditioning:- Definitions, classification and applications. Psychrometric properties, psychrometric charts elementary treatment with simple problems.
22.		Numericals
23.		Classification of gas turbines, construction and workng Gas turbine ideal and actual cycles constant volume, constant pressure, (Open and closed) cycle analysis.
24.		Regeneration & Numericals on it.
25.		Inter cooling & Numerical on it,
26.	IV	reheating application & Numerical on it.
27.		Optimum and maximum presure ratios, work ratios. Performance characteristics.
28.		Numericals on topic covered.
29.		Numerical on Combination of regeneration ,Inter cooling &reheating.
30.		Fields of application of gas turbine power plant. Introduction to jet propulsion, Ram jet, turbo jet
31.		Introduction :- Renewable & Nonrenewable sources. Solar Radiation :- Solar constant, basic earth-sun angles. Spectral distribution of extra terrestrial radiations & its variation.
32.		Different types of collectors
33.		Wind Power:- Wind speed data, power in the wind, wind power development, types of wind mills, application for pumping and power generation.
34.	V	generation. Biomass Energy Resources : Mechanism of green plant photosynthesis. efficienev of conversion, solar energy plantation,
35.		biogas – Types of biogas plants, factors affecting production rates. Pyrolysis, Gasifiess :
36.		Different types of Biogas plants
37.		Fuel cell & MHD generator
38.		NUCLEAR POWER : Fusion, fission,Chain reaction, Different nuclear fuels.
39.		conversion and breeding in nuclear fission,
40.		Classification and working of different reactors CANDU reactor.
41.		components of reactor, coolants, moderators etc.
42.		Different type of reactors such as boiling water,
43.		pressurized water Reactor
44.		gas cooled Reactor
45.	VI	liquidised metal cooled thermal reactors.

EC-2 Execution Plan

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	19/8/20	Reciprocating Comp. Construction & working		
2	20/8/20	PV diagram for R. Compressor & Workdone		
3	21/8/20	Compression methods & efficiencies.		
4	28/8/20	Intercooling & multistaging		
5	29/8/20	Calculations of work done, volumetric η		
6	2/9/20	Cond" for minimum work input		
7	3/9/20	Numericals on efficiencies of R. Comp.		
8	4/9/20	Numericals on IHP, BHP & efficiencies		
9	5/9/20	Rotary Compressor & Classification		
10	10/9/20	Equation of rotary machine		
11	11/9/20	Vane Blower & Numerical on it		
12	12/9/20	Root Blower & Numerical on it		
13	16/9/20	velocity diagram of Centrifugal Blower		
14	18/9/20	Axial flow compressor		
15	19/9/20	Numericals on topic covered.		
16	23/9/20	Numericals on topic covered.		
17	24/9/20	Classific" of refrigeration system		
18	25/9/20	VCR system		
19	26/9/20	Simple saturated VCR cycle Ph & TS		
20	30/9/20	Vapar absorption refr" system		
21	7/10/20	Numericals on NCR cycle		
22	8/10/20	Air refriger", Bell-colmin etc		
23	9/10/20	Reversed Carnot & rev Brayton cycle		
24	10/10/20	Air conditioning		
25	24/10/20	Psychrometric properties & chart		
26	4/11/20	G.T Classification & Introduction		
27	5/11/20	open & closed cycle G.T.		
28	6/11/20	methode to improve G.T efficiency		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty:- Prof. P.B Inwanjal Semester VII   Section: A/B/C   C

Subject Code: 7ME02   Subject Name: E.C-II (odd sem)

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
29	7/11/20	Regeneration of Numerical unit		
30	20/11/20	Intercooling 4 Numerical unit		
31	21/11/20	Reheating 4 Numerical unit		
32	25/11/20	Combined cycle & Numerical		
33	26/11/20	Optimum pressure & work ration		
34	27/11/20	Jet propulsion 4 jet engines		
35	28/11/20	Solar energy		
36	2/12/20	Solar constant, earth sun angle		
37	3/12/20	Solar different collectors		
38	4/12/20	Wind energy & wind mills		
39	5/11/20	Energy from Biomass		
40	9/12/20	Biogas plants 4 its types		
41	10/12/20	MHD generator & fuel cell		
42	11/12/20	Nuclear power & Nuclear fuel		
43	12/12/20	Reactions of nuclear fuels		
44	16/12/20	Nuclear reactors, CANDU reactor		
45	17/12/20	BWR, PWR		
46	18/12/20	Gas cooler reactor, liquid metal Cooler reactor		

Dept of Mechanical Engineering
PRMIT

Teaching Plan

Lecture No.	Unit	Topic covered	Remark
1	I	Renewable & Nonrenewable sources	
2		Solar Radiation ,Solar constant	
3		basic earth-sun angles	
4		Spectral distribution of extra terrestrial radiations & its variation	
5		Solar time (Local Apparent Time)	
6		Direction of beam radiation, computation of radiation on inclined surfaces, solar charts	
7		measurements of diffuse & global & direct radiations, duration of sunshine hours, computation of radiation data	
8		Attenuation of solar radiation by the atmosphere	
9	II	Radiation Transmission through covers- Reflection and absorption of radiation	
10		optical properties of cover systems transmittance effects of surface layers on transmittance, transmittance absorptance product	
11		Solar Energy collections: Heat transfer for solar energy utilization	
12		flat plate collectors such as liquid & air collector, collector overall heat transfer coefficient	
13		temperature distribution between the tubes & the collector efficiency factor useful heat gain	
14		heat removal & flow factors	
15		Testing of collectors & effects of various parameters on the performance	
16		Introduction to various systems of concentrating collectors	
17	III	Solar energy Utilisation:- Application of solar energy in heating, cooling	
18		Application of solar energy in pumping, power production	
19		Application of solar energy distillation, drying, solar cookers, solar pond, solar furnace	
20		Solar Energy Storage :- Methods of storage such as sensible, latent heat & thermo-chemical storage	
21		selection of method of storage	
22		properties of storage materials and different arrangements of storages	
23	IV	Tidal Power:- types of tidal plants such as single and two basin plants	
24		power developed & operation of tidal power plant	
25		Ocean thermal energy conversion system. Ocean temp. profile	
26		OTE power plant development, controlled flash evaporation, indirect vapour cycle.	
27		Salinity differences conversion of salinity gradient resources	
28		osmotic pump, dialytic battery	
29		Wind Power:- Wind speed data, power in the wind, wind power development	
30		Types of wind mills, application for pumping and power generation	
31	V	Biomass Energy Resources	
32		Mechanism of green plant photosynthesis. efficiency of conversion ,solar energy plantation	
33		Biogas – Types of biogas plants, factors affecting production rates	
34		Pyrolysis, Gasifiess : Types & classification. Straight vegetable oils as a liquid fuels and their properties, esterification process	
35		formation of Biodiesel	
36		Biodiesel and its properties	
37		suitable species for Biodiesel formation and its cultivation	
38		byproduct formation during esterification, Biodiesel economics	

39		Direct Energy Conversion:- Photo voltaic cells	
40		Photo voltaic cells : Principle, concept of energy conversion, conversion efficiency, power output and performance, storage	
41		Fuel Cells : Principles	
42	VI	types of fuel cells, conversion efficiency	
43		Geothermal Energy Resources	
44		power generation methods like vapour dominated. water dominated, flash steam	
45		binary fluid and total flow concept of power generation.	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty: Prof. Mr. P.R. Mamank Semester 7th   Section: A/B/C   NES 1

Subject Code: 7MEO5   Subject Name: Non-Conventional Energy systems (PF-1)

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1	11/08/20	Unit-I Introduction to NES, Importance Application	R	Only m
2	14/8/20	Renewable & Non-renewable sources	l	⌐
3	17/8/20	Solar Radiation, Solar Constant, terms	l	⌐
4	18/8/20	Basic Earth-Sun Angles	R	⌐⌐
5.	21/8/20	Spectral distribution of extraterrestr. Radiation	R	⌐
6.	24/8/20	LAT, Computation of Radiation on inclined surfaces (Numericals)	R	⌐
7.	25/8/20	Numericals	l	⌐
8.	28/8/20	Measurement of diffuse, global & direct radiation	l	⌐
9.	29/8/20	Attenuation of solar Radiation by Unit-II also	l	⌐
10.	4/9/20	Radiation transmission through covers, transmittance absorptance product	l	⌐
11.	5/9/20	Solar Energy collections, solar collector, Working principle		⌐
12.	7/9/20	FPC, collector overall Heat transfer coff	l	⌐
13.	8/9/20	temperature distribution bet the tube	l	⌐
14.	11/9/20	Testing of collectors & Effect of various parameters	l	⌐
15.	12/9/20	Introduction to various on the part concentrating collector	l	⌐
16.	14/9/20	Unit III + Solar Energy utilization in heating cool	l	⌐
17.	15/9/20	Application of solar energy in pump fit Power gen		⌐
18.	18/9/20	distillation, drying, solar cooker, Solar pond, solar furnace		⌐
19.	19/9/20	solar Energy storage		⌐
20.	21/9/20	Selection of method of storage		⌐
21.	22/9/20	Properties of storage materials & diff. arrangements of storage		⌐
22.	25/9/20	Unit IV - OTEC Power, Working principle	l	⌐

Name of Faculty: Prof. Mr. P. R. Mamank Semester 7th   Section: A/B/C   NES 1

Subject Code: 7ME05   Subject Name: Non-conventional Energy Systems (CPF-1)

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
23.	28/9/20	OTEC Power plant devpt. Anderson & Claudette	ℓ	Online
24.	29/9/20	Tidal Power, Single & two-basin PP	8	—ь
25.	3/10/20	Power developed & Operation of tidal PP	ℓ	—ь
26.	5/10/20	Numericals on Tides	ℓ	—ь
27.	6/10/20	Wind Power, Windspeed data	ℓ	—ь
28.	10/10/20	Wind power devpl. efficiency derivati	ℓ	—ь
29.	19/10/20	Numericals on Wind power	ℓ	—ь
30.	20/10/20	Types of Windmill, Applications	ℓ	—ь
31	25/10/20	(Unit VI) Direct Energy Convection-PV cells Hocking	ℓ	—ь
32.	24/10/20	Convection efficiency of PV cell Power o/p & performance	ℓ	—ь
33.	26/10/20	Fuel cell, Working Principle	ℓ	—ь
34.	31/10/20	Types of Fuel cell Conversion eff	ℓ	—ь
35.	2/11/20	Geothermal Energy Resources	ℓ	—ь
36.	3/11/20	Vapour dominated, Water domin. Resource	ℓ	—ь
37.	6/11/20	binary fluid & total flow concept of power generation.	ℓ	—ь
38	9/11/20	Unit V- Biomass Energy resources	ℓ	—ь
39.	10/11/20	Green plant Photosynthesis, SEP	ℓ	—ь
40.	23/11/20	Biogas, types of biogas plants	ℓ	—ь
41.	24/11/20	Factors affecting production of biogas plant	ℓ	—ь
42.	27/11/20	Pyrolysis, gasification of biogas plant	ℓ	—ь
43.	28/11/20	Biodiesel, its properties	ℓ	—ь
44	1/12/20	Suitable spec. for biodiesel forming	ℓ	—ь
45.	9/12/20	byproduct formation during esterification	ℓ	—ь

Teaching Plan

Subject: Non-Conventional Energy Systems (FE-II)   Semester: VI   Subject Code: 6FEME05

Lecture No.	Unit	Topic covered	Remark
1	I	Renewable & Nonrenewable sources	
2		Solar Radiation ,Solar constant	
3		basic earth-sun angles	
4		Spectral distribution of extra terrestrial radiations & its variation	
5		Solar time (Local Apparent Time)	
6		Direction of beam radiation, computation of radiation on inclined surfaces, solar charts	
7		measurements of diffuse & global & direct radiations, duration of sunshine hours, computation of radiation data	
9	II	Radiation Transmission through covers- Reflection and absorption of radiation	
10		optical properties of cover systems transmittance effects of surface layers on transmittance, transmittance absorptance product	
11		Solar Energy collections : Heat transfer for solar energy utilization	
12		flat plate collectors such as liquid collector	
13		Solar air Collector	
14		Introduction to various systems of concentrating collectors	
15	III	Solar energy Utilisation:- Application of solar energy in heating, cooling	
16		Application of solar energy in pumping, power production	
17		Application of solar energy distillation, drying, solar cookers,	
18		solar pond, solar furnace	
19		Solar Energy Storage :- Methods of storage such as sensible, latent heat & thermo-chemical storage	
20		selection of method of storage	
21		properties of storage materials and different arrangements of storages	
22	IV	Tidal Power:- types of tidal plants such as single and two basin plants	
23		power developed & operation of tidal power plant	
24		Ocean thermal energy conversion system. Oceam temp. profile	
25		OTE power plant development, controlled flash evaporation, indirect vapour cycle.	
26		Salinity differences conversion of salinity gradient resources ,osmotic pump, dialytic battery	
27		Wind Power:- Wind speed data, power in the wind, wind power development	
28		Types of wind mills, application for pumping and power generation	
29	V	Biomass Energy Resources	
30		Mechanism of green plant photosynthesis. efficiency of conversion ,solar energy plantation	
31		Biogas – Types of biogas plants, factors affecting production rates	
32		Pyrolysis,	
33		Gasifiess : Types & classification.	
34		Straight vegetable oils as a liquid fuels and their properties	
35		Introduction to bio-diesel as a diesel engine fuel	
36	VI	Direct Energy Conversion:- Photo voltaic cells	
37		Photo voltaic cells : Principle, concept of energy conversion, conversion efficiency, power output and performance, storage	
38		Fuel Cells : Principles	
39		types of fuel cells, conversion efficiency	
40		Geothermal Energy Resources	
41		power generation methods like vapour dominated. water	

		dominated, flash steam		
42		binary fluid and total flow concept of power generation.		

Prof.Ram Meghe Institute of Technology & Research, Badnera

Department of Mechanical Engineering

(Odd/Even Semester 2020-21)

Execution Plan

Name of Faculty: Prof. Mr. P.R. Mamank Semester 6th   Section: A/B/C

Subject Code: 6FEME05   Subject Name: Non-conventional Energy systems

(FE-II)

Sr.No.	Date	Topics Covered	Sign. Of Faculty	Sign of HOD
1.	22/1/21	Unit 1- Introduction to NES, importance, Appli/can	ℓ	Online
2.	23/1/21	Renewable & Non renewable source	ℓ	—u—
3.	23/1/21	Solar Radiation, solar constant	ℓ	—u—
4.	29/1/21	Basic Earth-Sun angles, LAT	ℓ	—l—
5.	30/1/21	Numericals on solar Radiat'n geomely	ℓ	—u—
6.	30/1/21	Spectral distribu'n of extraterrestrial Radi'n	ℓ	—u—
7.	5/2/21	Measurment of diffuse, global & direct radiat'n	ℓ	—u—
8.	6/2/21	Unit 2- Radiat'n transmission thro glass Covers	ℓ	—u—
9.	6/2/21	transmittance - absorptance product	ℓ	—u—
10	12/2/21	Solar Energy collections- Solar collector working perint	ℓ	—*
11	13/2/21	FPC	ℓ	—u—
12	13/2/21	solar a/r collector	ℓ	—u—
13	20/2/21	Effects of various parameters on the performance of FPC	ℓ	—u—
14	20/2/21	Concentrating collectors	ℓ	—l—
15	26/2/21	Unit 3- Solar Energy utilization in Heating cooli	ℓ	—u—
16	27/2/21	Solar energy application in pumping	ℓ	—u—
17	27/2/21	power production, distillation, drying	ℓ	—u—
18	5/3/21	Solar cooker, Solar pond, solar Furnace	ℓ	—u—
19	6/3/21	solar Energy storage, Methods of storage	ℓ	—u—
20	6/5/21	Latent heat, sensible heat, Thermochemica	ℓ	—u—
21.	12/3/21	selection criteria, properties of storage materials	ℓ	—u—
22.	15/3/21	Unit 4- OTEC Power, Working principle	ℓ	—u—
25.	13/3/21	OTEC power plant devpt, claude-Anderson cycle	ℓ	—u—
24.	19/3/21	Tidal power using single basin, double basin	ℓ	—u—
25.	20/3/21	Power developed & operation & app. of Tidal pp	ℓ	—u—

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of First Year Engineering Department

Name of Faculty :- Prof. P. P. Thosare	Lesson Plan	Semester:- I
Subject: Basic Electrical Engineering		Section : H

Lecture No.	Topics	Remark
1	Importance of subject & Introduction to syllabus	
	Unit – I: Fundamentals	
2	Basic concept of voltage, current, Power and energy.	
3	Resistance, resistivity, conductance, conductivity, Ohm's Law	
3	Temperature effect on resistance , Temperature coefficient of resistance	
4	Numerical on Temperature coefficient of resistance.	
5	Series & Parallel circuits	
6	Numerical on Series & Parallel circuits	
7	Delta – Star & Star-Delta transformation	
8	Numerical on Star Delta transformation	
9	Kirchhoff 's laws (KCL & KVL)	
10	Superposition Theorem	
11	Thevenin's Theorem	
12	Numericals on Superposition & Thevenin's Theorem	
	Unit-II: Magnetic Circuit & Electromagnetism	
13	Basic concepts of Magnetic flux, Flux density, MMF, Reluctance, Magnetic field intensity & their relationship	
14	Magnetic Leakage & Fringing of flux	
15	Series & Parallel magnetic circuit	
16	Series & Parallel magnetic circuit with air gap	
17	Series & Parallel magnetic circuit without air gap	
18	Numerical on series magnetic circuit	
19	Principles of electromagnetic induction, Self and mutual induction	
20	Magnetization curves	
	Unit – III : AC fundamentals	
21	RMS and average values, Form factor, peak factor (for sinusoidal waveform only)	
22	Purely resistive, inductive & capacitive circuit	
23	Single phase AC Series circuit with resistance , inductance & Capacitance	
24	Numericals on RLC series circuit.	

25	Phasor diagrams for series circuit & Series resonance	
26	Impedance triangle, Active & reactive power.	
27	Resonance in Series R-L-C Circuit and Numericals	
	Unit – IV : Polyphase Circuit	
28	Generation of three phase EMF.	
29	3 Phase Balanced Delta and Star connected system,	
30	Voltage and Current relationship between phase and line quantities for star connection	
31	Numerical on three phase star connected system	
32	Voltage and Current relationship between phase and line quantities for Delta connection	
33	Numerical on three phase Delta connected system	
	Unit – V : Electrical Machines	
35	A) Single phase Transformer:	
36	Principle of operation	
37	Construction & Classification	
38	EMF equation, losses, efficiency, Regulation of Transformer	
39	Numericals on efficiency , regulation of transformer	
40	B) Electromechanical Energy Conversion:	
41	Construction & various parts of DC machines	
42	Classification of DC machines, Characteristics & applications of DC machines	
	Unit – VI : Electrical Apparatus & Safety	
43	Measurement of current & voltage (Ammeter & Voltmeter)	
44	Measurement of power & energy (Wattmeter & Energy- meter)	
45	Range extension of Ammeter, Voltmeter, Wattmeter & Energy- meter	
45	Necessity of Earthing, Limiting values for various installation, Types of Earthing (Pipe earthing & plate earthing)	
46	Measurement of current & voltage (Ammeter & Voltmeter)	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of First Year Engineering Department

AY:	2020-21	Lesson Plan	
Name	Prof. Shailesh S. Dhik		Semester:- I st
Subject	Computer Programming	Subject Code:-1A4	Section : F
Leture No.	Topics		Remark
Unit-I	Fundamental of the Computer and Computing Concepts		
Lect1	Generation of computers		
Lect2	Classification of computers		
Lect3	Basic Anatomy of Computer System, Input Devices, Processor, Output Devices, Memory Management		
Lect4	Types of Computer Software, Overview of Operating system,		
Lect5	Networking Concepts, Microsoft Office,		
Lect6	Number systems: Decimal, Binary, Hexadecimal, Octal		
Lect7	Conversion of Numbers, Binary Arithmetic Operations		
Lect8	Programming Languages, Logic Gates		
Unit-II	C Fundamentals:		
Lect9	Introduction, Importance of C		
Lect10	Basic Structure of C Programs, Program execution		
Lect11	Basic programs based on C such as Printing Message		
Lect12	Adding two numbers, Interest calculations		
Lect13	Use of subroutines, math function		
Lect14	C tokens, Keywords and Identifiers,		
Lect15	Operators & their precedence, Assignment statement.		
Lect16	Declaration of Variables, Declaration of Storage Class		
Unit-III	Operators, Expression and Input-Output operation		
Lect17	Operators, Types of Operators: Arithmetic, Relational		
Lect18	Assignment, Increment-decrement		
Lect19	Logical operator Assignment, Conditional operator		
Lect20	Bitwise operator, Special operator		
Lect21	Evaluation of Expression		
Lect22	Precedence of Arithmetic Operators		
Lect23	Input-Output Operation: Reading and Writing Character		
Lect24	Formatted Input, Formatted Output.		
Unit - IV	C Control constructs		
Lect25	Decision-making using if, if-else		
Lect26	Nested if, else if ladder		
Lect27	switch-case statement		
Lect28	Operator, GotoOperator		
Lect29	Loops using for, while, do-while statements		
Lect30	break and continue statements		
Lect31	Jumps in loop		
Lect32	Concise Test Expressions		
Unit - V	Array, Strings and Structures		
Lect33	Introduction to array, One Dimensional Array: Declaration & Initialization,		

Lect34	Two Dimensional: Declaration & Initialization, Multi Dimensional,	
Lect35	Strings: Declaration and Initialization, Reading String from terminal, Writing String to Screen	
Lect36	Putting Strings together, Comparison of Two Strings	
Lect37	String-Handling Functions	
Lect38	Table of Strings, Other features of String.	
Lect39	Structures – Define, Declaration	
Lect40	Accessing the members of a structure	
Unit - VI	**User Defined Functions, Pointers and File Management**	
Lect41	Functions, Need for User defined Functions	
Lect42	Multi Function Program, Elements of User Defined Functions	
Lect43	Return Values and their types, Function Calls	
Lect44	Function Declaration, and Categories of Functions	
Lect45	Definition and uses of pointers, Accessing the address of a variable,	
Lect46	Introduction to File Management	
Lect47	Defining and Opening File, Closing File, Input/output Operations on File.	
Lect48	Input/output Operations on File.	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of First Year Engineering Department
AY:- 2020-21   **Lesson Plan**

Name of Faculty :- Prof. DR. K. D. Umaley		Semester:- I
Subject: ENGG. CHEMISTRY		Section : E

Lecture No.	Topics	Remark
	Water Treatment and Analysis	
1	Introduction, Hardness of water, Types of hardness - temporary & permenant hardness, Units of Hardness and their inter-conversion	
2	Hardness determination by EDTA method	
3	Disadvantages of hard of water, Boiler troubles: Scale and Sludge formation, Caustic embritlement,	
4	Priming & Foaming, Boiler corrosion	
5	Zeolite process and Reverse Osmosis (RO)	
6	Softening of hard water by Ion exchange process & its regeneration	
7	Numerical Problem based on Hardness of water	
8	Numerical Problem based on Zeolite process	
	UNIT No. 2	
	Corrosion and Energy storage system	
9	Introduction of corrosion, Dry and its mechanism	
10	Wet corrosion and its mechanism	
11	Pitting, waterline and inter-granular corrosion	
12	Galvonic and stress corrosion	
13	Role of design and material selection in corrosion control	
14	Anodic and cathodic protection, Hot dipping(Galvanizing and tinning processes)	
15	Basic principles of batteries & their types,	
16	Construction, working and application of lithium- ion battery, Ni-Cd battery.	
	UNIT No. 3	
	Engineering Materials	
17	Introduction of Portland cement, Raw materials for the manufacturing of portland cement.	
18	Manufacturing of portland cement by wet Process	
19	Properties of cement- Setting and hardening	
20	Heat of hydration and soudness of cement	
21	Introductuion of Lubricants and its classification, Machanism of Lubrication	
22	Testing of lubricants for viscosity and viscosity index, flash and fire point	
23	Industrial Material: Definition, properties and Applications of ceramics & refractories.	
24	Industrial Material: Definition, properties and Applications of thermal insulating material and Nanomaterial	
	UNIT No. 4	
	Energy Science	

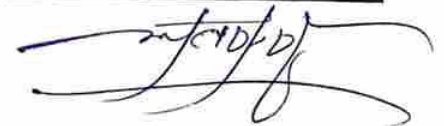|		
25	Introduction of Fuels and its classification, Calorific value and its type- net and gross calorific value	
26	Proxiamte and its significance	
27	Ultimate analysis and its significance	
28	Cracking of petroleum fractions, Use of gasoline and diesel in internal combusion engines	
29	Knocking, chemical constitution and knoking properties, octane and cetane number	
30	Numerical based on combustion	
31	Numerical based on combustion	
32	Numerical based on combustion	
	UNIT No. 5	
	Polymer chemistry	
33	Introduction, Classification of polymer on the basis of their structure	
34	Method of polymerization	
35	Cationic and Anionic mechanism of polymerization	
36	Thermosetting and thermoplastic resin	
37	Preparation, properties and uses of PVC, Teflon,	
38	Preparation, properties and uses Bakelite, Introduction of Natural rubber, vulcanization of rubber	
39	Preparation, properties and uses of synthetic rubber-styrene, nitrile and butyl rubber	
40	Biodegradable polymers: properties and applications, Conducting polymers: Introduction, types of conducting polymer and their examples	
	UNIT No. 6	
41	Phase rule, Explanation of the terms: Phase, Components and Degree of Freedom	
42	Application of Phase rule to One Component System (Water System),	
43	Condensed phase rule and its application to two component system (Bi-Cd).	
44	Principles and instrumentation of spectrophotometry	
45	U.V and.IR spectroscopy	
46	Principle & instrumentation of NMR spectroscopy	
47	Surface characterization technique: X-ray diffraction	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of First Year Engineering Department

AY:- 2020-21

Lesson Plan

Name of Faculty :- Prof. Dr N. B. Ingale

Subject: Engineering Physics (1A2)		Semester : I
		Section : A

Lecture No.	Topics	Remark
1	Introduction	
2	Formation of energy band	
3	Classification of solid on the basis of energy band gap	
4	Fermi level in intrinsic ,P and N type semiconductor	
5	Effect of temperature and impurity on fermi level	
6	Fermi level equation for intrinsic semiconductor	
7	Conductivity Equation, Problems	
8	Law of mass action and Charge neutrality eqution	
9	Hall effect	
10	Problems	
11	Properties of photon	
12	De Broglie's hypothesis and equation	
13	Compton effect and its characteristics	
14	Compton shift Equation	
15	Problems	
16	Heisenberg's Uncertainty principle	
17	Energy-time equation	
18	Applications of Uncertainty principle	
19	Problems	
20	Basic concepts of electric and magnetic field	
21	Motion of electron in transversed electric field	
22	Motion of electron in transversed magnetic field	
23	deflection of electron confined to a small region	
24	motion of e- in cross electric and magnetic field	
25	Positive Rays ,Bainbridge mass spetrograph	
26	CRO:Block diagram, its working and applications	
27	Problems	
28	Interference:Thin film due to reflected light	
29	Newton's ring	
30	Applications of Newton's rings	
31	Diffraction:Theory and Grating equation	
32	Problems	
33	FIBER OPTICS : Construction and principle	
34	Acceptance angle and NA	
35	Types of Optical fiber	
36	Attenuation,Advantages and applications	
37	Problems	
38	Laser: Properties,Applications	
39	Absorption, spontaneous and stimulated emission	
40	Metastable state, Pumping, Three level laser	
41	Ruby laser	
42	Acaustics of Buildings: reverberation,Sabine's Eqn.	
43	Basic Requirements for Acoustically Good Hall	
44	Factors affecting acoustically Good Hall	
45	Problems	
46	Continuity equation,Viscosity, Stoke's law	
47	Bernoulli's theorem	
48	Poiseuille's Equation	
49	Ultrasonics: Properties, Production of Ultrasonic	
50	Uses of Ultrasonics waves and Problems	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of First Year Engineering Department
Lesson Plan

AY: 2020-21

Name of Faculty :- Prof. C.T. Prajapati	Semester: I

Subject:	Engineering Mechanics	Section: C

Lecture No.	Topics	Remark
1	RESULTANT- Concept of a force	
2	RESULTANT- Moment of a force about a point and about an axis, couple	
3	RESULTANT- Resolution and compositions of coplanar force system.	
4	RESULTANT- Reduction of system of forces into a force and a couple equivalent force system.	
5	EQUILIBRIUM- Free-body diagrams, equations of equilibrium	
6	EQUILIBRIUM- Problems of equilibrium involving co-planar force system acting on a particle	
7	EQUILIBRIUM- Rigid body and system of rigid bodies	
8	EQUILIBRIUM- Problems of equilibrium of non-coplanar concurrent force system	
9	TRUSS- Analysis of simple plane trusses	
10	TRUSS- Method of joints	
11	TRUSS- Method of sections	
12	TRUSS- Analysis of frames involving ideally connected members.	
13	FRICTION- Coulomb's law of friction	
14	FRICTION- Problems on Friction	
15	FRICTION- Static belt friction	
16	FRICTION- Wedge friction	
17	CENTROID- First moment of an area and centroid	
18	CENTROID- Second moment of an area	
19	CENTROID- Centroid	
20	CENTROID- Product of area	
21	CENTRE OF GRAVITY- Transfer theorems, polar moment of inertia	
22	CENTRE OF GRAVITY- Radius of gyration	
23	CENTRE OF GRAVITY- Definition of principle axes and principle moment of inertia.	
24	KINEMATICS- Definitions of displacement, velocity and acceleration and their relations	
25	KINEMATICS- Rectilinear motion under variable & constant accelerations	
26	KINEMATICS- Motion curves	
27	KINEMATICS- Simple relative motion between two particles	
28	KINEMATICS- Curvilinear motion using rectangular coordinates	
29	KINEMATICS- Normal and tangential components	
30	KINEMATICS- Kinematics of rigid body motion in rectilinear translation	
31	KINEMATICS- Rotation about a fixed axis and plane motion	

32	KINETICS- Kinetics of rectilinear and circular motion of a particle acted upon by constant force system	
33	KINETICS- Kinetics of rectilinear and circular motion of a particle acted upon by variable force system	
34	KINETICS- D'Alembert's principle	
35	KINETICS- Concept of dynamic equilibrium	
36	KINETICS- Rectilinear motion of several interconnected particles	
37	KINETICS- Kinetics of rigid body rectilinear translation	
38	KINETICS- Rotation about a fixed axis of rigid body	
39	WORK, POWER and ENERGY- Work-energy equation for motion of a particle	
40	WORK, POWER and ENERGY- Problems on motion of a particle	
41	WORK, POWER and ENERGY- System of particles	
42	WORK, POWER and ENERGY- Work energy equation for rigid bodies rectilinear translation	
43	LINEAR IMPULSE- Linear impulse, linear momentum, momentum equation for a particle and a system of particles	
44	LINEAR IMPULSE- Collision of two particles	
45	LINEAR IMPULSE- Coefficient of restitution	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of First Year Engineering

AY:- 2020-21   **Lesson Plan**

Name of Faculty :- Prof. J.P. Morey		Semester:- I
Subject: Engg. Graphics Subject Code:- 184		Section:- H

Lecture No.	Topics	Remark
	Unit 1 - Introduction to Engineering Drawing and Projection	
1	Introduction to engineering instruments, concept of dimension and scale, geometric construction	
2	Projection of points by 1st angle method	
3	Projection of points by 3rd angle method	
4	Projection of line by 1st angle method & 3rd angle method	
5	Projection of line by 1st and 3rd angle method(Inclined to one plane)	
6	Projection of line inclined to both plane.	
7	Projection of plane (By using different type of plane)	
8	Projection of plane (By using auxiliary plane method)	
	Unit 2 - Projection of Solids	
9	Introduction	
10	Projection of Prism (By using different resting conditions)	
11	Projection of Prism (By using different resting conditions)	
12	Projection of Pyramid (By using different resting conditions)	
13	Projection of Pyramid (By using different resting conditions)	
14	Projection of Cone (By using different resting conditions)	
15	Projection of Cylinder (By using different resting conditions)	
	Unit 3 - Section of Solids	
16	Introduction	
17	Section of prism by different cutting plane (Using different resting conditions)	
18	Section of prism by different cutting plane (By using different resting conditions)	
19	Section of pyramid by different cutting plane (By using different resting conditions)	
20	Section of pyramid by different cutting plane (By using different resting conditions)	
21	Section of cone by different cutting plane (By using different resting conditions)	
22	Section of cylinder by different cutting plane (By using different resting conditions)	

Lecture No.	Topics	Remark
	Unit 4 - Orthographic Projection	
23	Introduction	
24	Problems on orthographic projection by first angle method	
25	Problems on orthographic projection by first angle method	
26	Problems on orthographic projection by first angle method	
27	Problems on orthographic projection by third angle method	
28	Problems on orthographic projection by third angle method	
29	Problems on orthographic projection by third angle method	
	Unit 5 - Isometric Views and Projection	
30	Introduction	
31	Problems on isometric views	
32	Problems on isometric views	
33	Problems on isometric views	
34	Problems on isometric views	
35	Problems on isometric projection	
36	Problems on isometric projection	
37	Problems on isometric projection	
	Unit 6 - Introduction to CAD software	
38	Introduction	
39	Drafting environment and screen	
40	Coordinate systems	
41	Editing commands	
42	Drafting of basic geometrical shapes	
43	Display commands and dimension command	
44	CAD software customization	

AY:- 2020-21		
Name of Faculty :- D.G. More		Semester:- I
Subject : Engg. Mathematics - I	Subject Code:-1A1/11945	Section : E

Lect. No.	Topics	Remark
1	**Unit 1:**-Introduction of syllabus & university Examination Pattern.	
2	Succesive differentiation	
3	Leibnitz's theorem	
4	Roll's Theorem	
5	Mean value theorem	
6	Expansion of a function by using Taylor's theorem.	
7	Expansion of a function by using Maclaurin's theorem.	
8	Indeterminate form 1	
9	**Unit 2:**-Introduction of partial differentiation	
10	Partial differentiation 1.	
11	Total differential coefficients 1.	
12	Exact differential.	
13	Euler's theorem on homogeneous function 1.	
14	Euler's theorem on homogeneous function 2.	
15	Maxima and Minima of a function 1	
16	Maxima and Minima of a function 2	
17	**Unit 3:**-Introduction of Complex Number	
18	Demoiver's theorem.	
19	Application of Demoiver's theorem 1.	
20	Application of Demoiver's theorem 2.	
21	Hyperbolic and Inverse hyperbolic function 1.	
22	Hyperbolic and Inverse hyperbolic function 2.	
23	Separation of real and Imaginary parts 1.	
24	Logarithm of Complex number 1.	
25	**Unit 4:**-Introduction First order and first degree in various forms, Variable separable	
26	Homogeneous differential equation.	
27	Reducible toHomogeneous differential equation.	
28	Exact differential equation.	
29	Reducible to Exact differential equation.	
30	Linear differential equation.	
31	Reducible to Linear differential equation.	
32	Methods of Substitution.	
33	**Unit 5:**-Introduction of differential equation of first order and higher degree.	
34	Solvable for P 1.	
35	Solvable for P 2.	
36	Solvable for Y 1.	

37	Solvable for Y 2	
38	Solvable for X	
39	Application of D.E of first order and higher degree to the Problem on orthogonal trajectories 1.	
40	Application of D.E of first order and higher degree to the Problem on Electrical Engineering 1.	
41	Unit 6:-Introduction of Sequences and Series	
42	Convergence of sequences and series	
43	Test for convergence	
44	Comparision Test	
45	Ratio Test	
46	Root Test	
47	Raabe's Test	
48	Range of Convergence	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of First Year Engineering Department
Lesson Plan

Faculty :- Prof. Dr. D. V. Kapse

Subject Code:- 1BT/11949

Semester :- I

Engg. Mathematics-II

Section : H

Topics	Remark
Unit I : Introduction to matrix	
partitioning method for inverse	
Rank of the matrix	
Rank and Nulity Theorem	
Solution of simultaneous equations by matrix method.	
Characteristic equation,eigen values	
eigen vectors	
Cayley Hamilton theorem to find inverse	
Unit II : Introduction to Fourier series and it's uses.	
Fourier series for periodic function in the range (c,c+2L)	
Fourier series in the range (c,c+2L)	
Half range fourier sine series	
half range fourier cosine series.	
Parsevell's Theorem	
Harmonic Analysis: introduction	
Problems on Harmonic Analysis	
Unit III : Introduction to reduction formulae	
Reduction formulae	
Reduction formulae	
Gamma function and its properties	
Gamma function examples	
Beta function and its properties	
Examples of Beta function	
Relation between Beta and Gamma Function	
Unit IV : Rules of Differentiation under Integral sign when limit's are constant	
Rules of Differentiation under Integral sign when limit's are Parameter	
Tracing of curve in cartesian coordinates.	
Tracing of curve in polar coordinates.	
Tracing of curve in polar and parametric form	
Rectification in cartesian coordinates	
Rectification in cartesian coordinates	

Lesson Plan

AY:- 2020-21

Name of Faculty :- Prof. P. P. Thosare		Semester:- II
Subject : Basic Electrical Engineering		Section : B
Lecture No.	Topics	Remark
1	Importance of subject & Introduction to syllabus	
	Unit – I: Fundamentals	
2	Basic concept of voltage, current, Power and energy.	
3	Resistance, resistivity, conductance, conductivity, Ohm's Law	
3	Temperature effect on resistance , Temperature coefficient of resistance	
4	Numerical on Temperature coefficient of resistance.	
5	Series & Parallel circuits	
6	Numerical on Series & Parallel circuits	
7	Delta – Star & Star-Delta transformation	
8	Numerical on Star Delta transformation	
9	Kirchhoff 's laws (KCL & KVL)	
10	Superposition Theorem	
11	Thevenin's Theorem	
12	Numericals on Superposition & Thevenin's Theorem	
	Unit-II: Magnetic Circuit & Electromagnetism	
13	Basic concepts of Magnetic flux, Flux density, MMF, Reluctance, Magnetic field intensity & their relationship	
14	Magnetic Leakage & Fringing of flux	
15	Series & Parallel magnetic circuit	
16	Series & Parallel magnetic circuit with air gap	
17	Series & Parallel magnetic circuit without air gap	
18	Numerical on series magnetic circuit	
19	Principles of electromagnetic induction, Self and mutual induction	
20	Magnetization curves	
	Unit – III : AC fundamentals	
21	RMS and average values, Form factor, peak factor (for sinusoidal waveform only)	
22	Purely resistive, inductive & capacitive circuit	
23	Single phase AC Series circuit with resistance , inductance & Capacitance	
24	Numericals on RLC series circuit.	

25	Phasor diagrams for series circuit & Series resonance	
26	Impedance triangle, Active & reactive power.	
27	Resonance in Series R-L-C Circuit and Numericals	
	Unit – IV : Polyphase Circuit	
28	Generation of three phase EMF.	
29	3 Phase Balanced Delta and Star connected system.	
30	Voltage and Current relationship between phase and line quantities for star connection	
31	Numerical on three phase star connected system	
32	Voltage and Current relationship between phase and line quantities for Delta connection	
33	Numerical on three phase Delta connected system	
	Unit – V : Electrical Machines	
35	A) Single phase Transformer:	
36	Principle of operation	
37	Construction & Classification	
38	EMF equation, losses, efficiency, Regulation of Transformer	
39	Numericals on efficiency , regulation of transformer	
40	B) Electromechanical Energy Conversion:	
41	Construction & various parts of DC machines	
42	Classification of DC machines, Characteristics & applications of DC machines	
	Unit – VI : Electrical Apparatus & Safety	
43	Measurement of current & voltage (Ammeter & Voltmeter)	
44	Measurement of power & energy (Wattmeter & Energy- meter)	
45	Range extension of Ammeter, Voltmeter, Wattmeter & Energy- meter	
45	Necessity of Earthing, Limiting values for various installation, Types of Earthing (Pipe earthing & plate earthing)	
46	Measurement of current & voltage (Ammeter & Voltmeter)	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of First Year Engineering Department

AY:	2020-21	Lession Plan	
Name	Prof. Shailesh S. Dhok		Semester:- IInd
Subject	Computer Programming	Subject Code:-1A4	Section : L
Leture No.	Topics		Remark
Unit-I	**Fundamental of the Computer and Computing Concepts**		
Lect1	Generation of computers		
Lect2	Classification of computers		
Lect3	Basic Anatomy of Computer System, Input Devices, Processor, Output Devices, Memory Management		
Lect4	Types of Computer Software, Overview of Operating system,		
Lect5	Networking Concepts, Microsoft Office,		
Lect6	Number systems: Decimal, Binary, Hexadecimal, Octal		
Lect7	Conversion of Numbers, Binary Arithmetic Operations		
Lect8	Programming Languages, Logic Gates		
Unit-II	**C Fundamentals:**		
Lect9	Introduction, Importance of C		
Lect10	Basic Structure of C Programs, Program execution		
Lect11	Basic programs based on C such as Printing Message		
Lect12	Adding two numbers, Interest calculations		
Lect13	Use of subroutines, math function		
Lect14	C tokens, Keywords and Identifiers,		
Lect15	Operators & their precedence, Assignment statement.		
Lect16	Declaration of Variables, Declaration of Storage Class		
Unit-III	**Operators, Expression and Input-Output operation**		
Lect17	Operators, Types of Operators: Arithmetic, Relational		
Lect18	Assignment, Increment-decrement		
Lect19	Logical operator Assignment, Conditional operator		
Lect20	Bitwise operator, Special operator		
Lect21	Evaluation of Expression		
Lect22	Precedence of Arithmetic Operators		
Lect23	Input-Output Operation: Reading and Writing Character		
Lect24	Formatted Input, Formatted Output.		
Unit - IV	**C Control constructs**		
Lect25	Decision-making using if, if-else		
Lect26	Nested if, else if ladder		
Lect27	switch-case statement		
Lect28	Operator, GotoOperator		
Lect29	Loops using for, while, do-while statements		
Lect30	break and continue statements		
Lect31	Jumps in loop		
Lect32	Concise Test Expressions		
Unit - V	**Array, Strings and Structures**		
Lect33	Introduction to array, One Dimensional Array: Declaration & Initialization,		

Lect34	Two Dimensional: Declaration & Initialization, Multi Dimensional,	
Lect35	Strings: Declaration and Initialization, Reading String from terminal, Writing String to Screen	
Lect36	Putting Strings together, Comparison of Two Strings	
Lect37	String-Handling Functions	
Lect38	Table of Strings, Other features of String,	
Lect39	Structures – Define, Declaration	
Lect40	Accessing the members of a structure	
Unit - VI	**User Defined Functions, Pointers and File Management**	
Lect41	Functions, Need for User defined Functions	
Lect42	Multi Function Program, Elements of User Defined Functions	
Lect43	Return Values and their types, Function Calls	
Lect44	Function Declaration, and Categories of Functions	
Lect45	Definition and uses of pointers, Accessing the address of a variable,	
Lect46	Introduction to File Management	
Lect47	Defining and Opening File, Closing File, Input/output Operations on File.	
Lect48	Input/output Operations on File.	

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of First Year Engineering Department

AY:- 2020-21

Lesson Plan

Name of Faculty :- Prof. DR. K. D. Umaley		Semester:- I
Subject: ENGG. CHEMISTRY		Section : E

Lecture No.	Topics	Remark
	Water Treatment and Analysis	
1	Introduction, Hardness of water, Types of hardness - temporary & permenant hardness, Units of Hardness and their inter-conversion	
2	Hardness determination by EDTA method	
3	Disadvantages of hard of water, Boiler troubles: Scale and Sludge formation, Caustic embritlement,	
4	Priming & Foaming, Boiler corrosion	
5	Zeolite process and Reverse Osmosis (RO)	
6	Softening of hard water by Ion exchange process & its regeneration	
7	Numerical Problem based on Hardness of water	
8	Numerical Problem based on Zeolite process	
	UNIT No. 2	
	Corrosion and Energy storage system	
9	Introduction of corrosion, Dry and its mechanism	
10	Wet corrosion and its mechanism	
11	Pitting, waterline and inter-granular corrosion	
12	Galvonic and stress corrosion	
13	Role of design and material selection in corrosion control	
14	Anodic and cathodic protection, Hot dipping(Galvanizing and tinning processes)	
15	Basic principles of batteries & their types,	
16	Construction, working and application of lithium- ion battery, Ni-Cd battery.	
	UNIT No. 3	
	Engineering Materials	
17	Introduction of Portland cement, Raw materials for the manufacturing of portland cement.	
18	Manufacturing of portland cement by wet Process	
19	Properties of cement- Setting and hardening	
20	Heat of hydration and soudness of cement	
21	Introductuion of Lubricants and its classification, Machanism of Lubrication	
22	Testing of lubricants for viscosity and viscosity index, flash and fire point	
23	Industrial Material: Definition, properties and Applications of ceramics & refractories.	
24	Industrial Material: Definition, properties and Applications of thermal insulating material and Nanomaterial	
	UNIT No. 4	
	Energy Science	

25	Introduction of Fuels and its classification, Calorific value and its type- net and gross calorific value	
26	Proxiamte and its significance	
27	Ultimate analysis and its significance	
28	Cracking of petroleum fractions, Use of gasoline and diesel in internal combusion engines	
29	Knocking, chemical constitution and knoking properties, octane and cetane number	
30	Numerical based on combustion	
31	Numerical based on combustion	
32	Numerical based on combustion	
	UNIT No. 5	
	Polymer chemistry	
33	Introduction, Classification of polymer on the basis of their structure	
34	Method of polymerization	
35	Cationic and Anionic mechanism of polymerization	
36	Thermosetting and thermoplastic resin	
37	Preparation, properties and uses of PVC, Teflon,	
38	Preparation, properties and uses Bakelite, Introduction of Natural rubber, vulcanization of rubber	
39	Preparation, properties and uses of synthetic rubber-styrene, nitrile and butyl rubber	
40	Biodegradable polymers: properties and applications, Conducting polymers: Introduction, types of conducting polymer and their examples	
	UNIT No. 6	
41	Phase rule, Explanation of the terms: Phase, Components and Degree of Freedom	
42	Application of Phase rule to One Component System (Water System),	
43	Condensed phase rule and its application to two component system (Bi-Cd).	
44	Principles and instrumentation of spectrophotometry	
45	U.V and.IR spectroscopy	
46	Principle & instrumentation of NMR spectroscopy	
47	Surface characterization technique: X-ray diffraction	

Department of Management Studies
Semester –I
Teaching Plan-2020-2021
Subject: Accounting for Managers
Subject Teacher: Prof. N. M. Gawande

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	01	Introduction to Accounting and Book Keeping, Single Entry System	Accounting for Mgt., Dr. Jawaharlal, Himalaya Pub. House. Accounting for Mgt., S.K. Bhattacharya and Dearden J., New Delhi, Vikas, 1996 Accounting for Mgt., Khan and Jain.	01	
	02	Double Entry System, Basic Accounting Terms		01	
	03	Financial Accounting, Management Accounting & Cost Accounting		01	
	04	Accounting Standards: Introduction, GAAP		01	
	05	IFRS, GAAP Vs IFRS		01	
	06	Case Study and Situation		01	
Total Lecture				**06**	
II	01	Preparation of Accounting Books: 3 Golden Rules of Accounting	Accounting for Mgt., Dr. Jawaharlal, Himalaya Pub. House. Accounting for Mgt., S.K. Bhattacharya and Dearden J., New Delhi, Vikas, 1996 Accounting for Mgt., Khan and Jain.	01	
	02	Journal Entries		01	
	03	Ledger Preparation		01	
	04	Trial Balance		02	
	05	Preparation of Trading Account, Manufacturing Account: Part 1		01	
	06	Profit and Loss Account		01	
	07	Understanding Balance Sheet		01	
	08	Numerical on Balance Sheet			
	09	Final Account Problems: Part 1			
	10	Final Account Problems: Part 2			
	11	Comparative Analytical Techniques (CAT)			
	12	Relative Analytical Techniques (RAT)			
Total Lecture				**12**	
III	01	Depreciation Methods: Part - I	Accounting for Mgt., Dr. Jawaharlal, Himalaya Pub.	01	
	02	Depreciation Methods: Part		01	

		- II			
	03	Inventory Valuation Methods – Part I		01	
	04	Inventory Valuation Methods – Part II	House.	01	
	05	Inventory Valuation Methods – Part III	Accounting for Mgt., S.K. Bhattacharya and Dearden J., New	01	
	06	Case Study and Situation		01	
Total Lecture				**06**	
IV	01	Management Accounting Concept, Need, Importance & Scope	Accounting for Mgt., Dr. Jawaharlal, Himalaya Pub. House.	01	
	02	Budget & Budgetary control: Part I		01	
	03	Budget & Budgetary control: Part II	Accounting for Mgt., S.K. Bhattacharya and Dearden J., New Delhi, Vikas, 1996	01	
	04	Budget & Budgetary control: Part III		01	
	05	Performance & zero Based Budgeting	Accounting for Mgt., Khan and Jain.	01	
	06	Case Study and Situation		01	
Total Lecture				**06**	
V	01	Cost Sheet: Introduction, Elements of Cost Sheets	Accounting for Mgt., Dr. Jawaharlal, Himalaya Pub. House.	01	
	02	Types of Costing, Costing for Decision Making		01	
	03	Marginal Costing: Part I	Accounting for Mgt., S.K. Bhattacharya and Dearden J., New Delhi, Vikas, 1996 Accounting for Mgt., Khan and Jain.	01	
	04	Marginal Costing: Part I		01	
	05	Absorption Costing: Part I		01	
	06	Absorption Costing: Part II		01	
	07	Case Study and Situation		01	
Total Lecture				**07**	

.

	PRMIT&R		
	Department of Management Studies(MBA)		
	Session Plan 2020-2021		
	Business Ethics		
	Subject Teacher: Prof. Rajkumar K Dhanuka		
Unit No	**Topic**	**Reference Book**	**Estimated Lectures**
Unit No - I	INDIAN MANAGEMENT Indian Management – Principles	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
	Models & Theory of Karma	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
	Theory and Practices of Holistic Management and its relevance	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
	Case Lets & Case Study	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
Unit No - II	ETHICS Ethics – Meaning & Objectives	Business Ethics By:- CSV Murthy, Himalaya Publications	1
	Sources of Ethics	Business Ethics By:- CSV Murthy, Himalaya Publications By: -Frank Jefkins (Pearson Publication)	1
	Types of Business Ethics	Business Ethics By:- CSV Murthy, Himalaya Publications By: -Frank Jefkins (Pearson Publication)	1
	Factors influencing Business Ethics	Business Ethics By:- CSV Murthy, Himalaya Publications	2
	Ethics V/s Morals and Values	Business Ethics By:- CSV Murthy, Himalaya Publications	1
	Case Lets & Case Study	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	1
Unit No - III	MANAGING ETHICS Managing Ethics – Theories of Ethics	Business Ethics By:- CSV Murthy, Himalaya Publications	1
	Ethical Dilemma & Codes of Ethics , Behavioral Aspects of Ethics and Values	Business Ethics By:- CSV Murthy, Himalaya Publications	2
	Normative Ethics in Management, Need and Values of Ethics in Global Change	Business Ethics By:- CSV Murthy, Himalaya Publications	2

	Case Lets & Case Study	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
Unit No - IV	INDIAN VALUES IN MANAGEMENT Indian Values in Management – Secular and Spiritual Values	Business Ethics By:- CSV Murthy, Himalaya Publications Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	1
	Science and Human Values	Business Ethics By:- CSV Murthy, Himalaya Publications	2
	Lessons from Ancient Indian Educational System	Business Ethics By:- CSV Murthy, Himalaya Publications Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	1
	Case Lets & Case Study	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
Unit No - V	STRESS MANAGEMENT Stress Eustress & distress	Business Ethics By:- CSV Murthy, Himalaya Publications	1
	Indian Perspective of Stress Management	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	1
	Reasons for stress at workplace	Business Ethics By:- CSV Murthy, Himalaya Publications Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications By: -Frank Jefkins (Pearson Publication)	2
	Coping with a stress	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	1
	Case Lets & Case Study	Indian Ethos and Values ,N.M.Khandelwal, Himalaya Publications	2
Total Lectures required to Cover Syllabus			35

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Semester – I (Session 2020-2021)

Subject: Managerial Economics

SUBJECT TEACHER: Prof. P. A. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to Managerial Economics	Managerial Economics- Dr. D.M. Mithani HP Managerial Economics- Geetika	1	Total Lectures for Unit I: 6
	2	Concept & Need of Managerial Economics		1	
	3	Scope of Managerial Economics		1	
	4	Techniques and Applications of Managerial Economics		2	
	5	Case Study		1	
II	1	Utility Analysis & Marshal Approach	Managerial Economics- Dr. D.M. Mithani HP Managerial Economics- Geetika Managerial Economics- H. L. Ahuja	1	Total Lectures for Unit II: 8
	2	Law of diminishing marginal utility & problems		1	
	2	Demand Analysis, Determinants of demand		1	
	3	Demand Function, Law of Demand-problems		1	
	4	Elasticity of Demand and demand forecasting.		1	
	5	Law of Supply and Supply Analysis		1	
	6	Case Study/ Problems		2	
III	1	Intro. To production, Production & Cost function,	Managerial Economics- Dr. D.M. Mithani HP Managerial Economics- Geetika Managerial Economics- Ahuja	1	Total Lectures for Unit III: 8
	2	Law of diminishing marginal returns		1	
	3	Production Iso-quant, Iso-cost, Expansion path		1	
	4	Problems on Production Iso-quant, Iso-cost		1	
	5	Economies and Diseconomies of scale		1	
	6	short run and long run cost behavior		1	
	7	Case Study/ Problems		2	
IV	1	Theories of firm	Managerial Economics- Dr. D.M. Mithani HP Managerial Economics- Grrtika Managerial Economics- Ahuja	1	Total Lectures for Unit IV: 8
	2	Profit Maximization		2	
	3	Sales Maximization		1	
	4	Managerial Utility Model		1	
	5	Simon Satisfying Behaviour Model		1	
	6	Case Study/Problems		2	
V	1	Market Structure-Perfect Competition,	Managerial Economics- Dr. D.M. Mithani HP Managerial Economics- H. L. Ahuja	1	Total Lectures for Unit V: 6
	2	Monopoly, Oligopoly, Monopolistic Competition,		1	
	3	short term pricing in these market structure		2	
	4	Case Study/ Problems		2	
			Total Lectures Required	36	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies
Semester –I (Session 2020-2021)
Subject: Management Information System
SUBJECT TEACHER: Prof. S. B. Diwan

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Management Information System : An Overview	Jawadekar W.S., Management Information System; D.P.Goyal, Management Information System; Gupta, Management Information System	1	Total Lectures for Unit I: 6
	2	Nature and Scope of MIS		1	
	3	Subsystems of MIS , MIS & Computer		2	
	4	MIS in Academics, MIS in Business		1	
	5	Caselet on Subsystem on MIS & MIS in Business		1	
II	1	Development of MIS: Information Requirement	Jawadekar W.S., Management Information System; D.P.Goyal, Management Information System; Gupta, Management Information System	1	Total Lectures for Unit II: 8
	2	Designing of MIS		1	
	3	Implementation of MIS		1	
	4	System Development Models		2	
	5	Quality in MIS		1	
	6	MIS Life Cycle		1	
	7	Caselet on MIS Designing, Implementation of MIS		1	
III	1	Decision-Making concepts	Jawadekar W.S., Management Information System; D.P.Goyal, Management Information System; Gupta, Management Information System	1	Total Lectures for Unit III: 8
	2	Decision Making : Decision Making Process		1	
	3	Stages in Decision Making ,Individual & Organizational Decision Making		2	
	4	Decision Making Models		1	
	5	Information System support for Decision Making Phase, MIS and Decision-Making		2	
	6	Caselet on Decision Making in MIS		1	
IV	1	Decision Support System : Concept, Constructing a DSS	Jawadekar W.S., Management Information System; D.P.Goyal, Management Information System; Gupta, Management Information System	1	Total Lectures for Unit IV: 8
	2	Executive Information System(EIS)		1	
	3	Artificial Intelligence System(AIS)		1	
	4	Knowledge Based Expert System(KBES)		2	
	5	Enterprise Management System(EMS)		1	
	6	Decision Support Management System(DSMS)		1	
	7	Caselet on Enterprise Management System		1	
V	1	MIS Application: Enterprise Resource Planning(ERP)	Jawadekar W.S., Management Information System; D.P.Goyal, Management Information System; Gupta, Management Information System	1	Total Lectures for Unit V: 6
	2	MIS & ERP		1	
	3	Business Process Re-Engineering(BPR)		1	
	4	MIS & BPR		1	
	6	Case Study on ERP		1	
	7	Case Study on BPR		1	
		Total Lectures Required		**36**	

Adwil
HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

		Department of Management Studies		
		Semester –I (Session 2020-2021)		
		Lesson Plan		
Subject: Managerial Skills Development			Subject Teacher: Yuvaraj Vaidya	
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted
I	1	Managerial Skills- Nature & Concepts	http://arulmj.tripod.com/mgrlskls.html	2
	2	Objectives, significance	http://www.answers.com/Q/ Explain_managerial_roles_and_managerial_skills	1
	3	Employability Skills	http://www.kent.ac.uk/careers/sk/top-ten-skills.htm	1
	4	Soft Skills	https://bemycareercoach.com/soft-skills/list-soft-skills.html	1
	5	Technical Skills.	http://study.com/academy/lesson/what-are-technical-skills-in-management-definition-examples-quiz.html	1
	6	Case Study	Uniersity Question Papers	1
II	7	Importance & Nature of communication,	Business Communication by M Raman & P Singh	1
	8	Verbal and Non Verbal,	Business Communication by U Rai & S Rai	1
	9	Talking and Speaking	Business Communication by M Raman & P Singh	1
	10	Principles of effective communication,	https://www4.uwm.edu/cuts/bench/commun.htm	1
	11	Process of communication,	Business Communication by U Rai & S Rai	1
	12	Barriers of Communication,	Business Communication by U Rai & S Rai	1
	13	Types of Communication.	Business Communication by U Rai & S Rai	1
	14	Case Study	Uniersity Question Papers	1
III	15	Do's and Don'ts of Business Writing	Business Communication by M Raman & P Singh	2
	16	Business correspondence	Business Communication by M Raman & P Singh	1
	17	Report Writing	Business Communication by M Raman & P Singh	1

	18	e-communication	Business Communication by M Raman & P Singh	1
	19	Resume Writing, C.V. Writing,	Business Communication by U Rai & S Rai	1
	20	Case Study	Uniersity Question Papers	1
IV	21	Listening Skills	Business Communication by M Raman & P Singh	1
	22	Body Language	http://www.businessballs.com/body-language.htm	1
	23	Public Speaking	Business Communication by M Raman & P Singh	1
	24	Negotiation Skill.	https://www.ldsjobs.org/ers/ct/articles/effective-negotiation-skills?lang=eng	1
	25	Case Study	Uniersity Question Papers	1
V	26	Interview Techniques	Business Communication by M Raman & P Singh	2
	27	Group Discussions	Business Communication by M Raman & P Singh	1
	28	Presentation Skill.	Business Communication by U Rai & S Rai	1
	29	Meetings	Business Communication by U Rai & S Rai	1
	30	Case Analysis	Uniersity Question Papers	1
	31	Brain Storming	http://www.mindtools.com/brainstm.html	1
	32	Paper Writing and Presentation	http://www.miami.edu/index.php/undergraduate_research_and_community_outreach/research_opportunities_for_um_undergrads/presentations_research_papers/	1
	33	Case Study	Uniersity Question Papers	1

Total lectures required	36

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

PRMIT&R

Department of Management Studies(MBA)

Session Plan 2020-2021

Organizational Behavior and Effectiveness

Subject Teacher: Prof. Rajkumar K Dhanuka

Unit No	Topic	Reference Book	Estimated Lectures
Unit No - I	Individual Behavior-Personality	Mainiero, L A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.	1
	Learning	Mainiero, L A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.	1
	Perception	Kolb, D. etc. Organizational Behaviour: An Experiential Approach. 5th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1991	1
	Attitude & Beliefs	Kolb, D. etc. Organizational Behaviour: An Experiential Approach. 5th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1991	2
	Case Lets & Case Study	University Question Papers	2
Unit No - II	Group Behavior – Meaning	French, W L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990.	1
	Types of Groups,	French, W L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990.	1
	Group Processes	Mainiero, L A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.	1
	Group Dynamics – factors influencing intergroup behavior and managing intergroup behavior	Mainiero, L A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.	2
	Case Lets & Case Study	University Question Papers	2
Unit No - III	Organizational Change – Concept & Need	Kolb, D. etc. Organizational Behaviour: An Experiential Approach. 5th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1991	1
	Change Process	Kolb, D. etc. Organizational Behaviour: An Experiential Approach. 5th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1991	1
	Reasons for	Mainiero, L A & Tromley C.L. Developing Managerial Skills in	1

		Resistance to Change		
		Measures to Overcome Resistance to Change	OB. New Delhi, Prentice Hall of India, 1985.	1
			Mainiero, L A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.	
		Case Lets & Case Study	University Question Papers	2
Unit No - IV		Organizational Processes – Organizational Powe	De Nitish. Alternative Designs of Human Organizations. London, Sage, 1988.	2
		Organizational Politics	De Nitish. Alternative Designs of Human Organizations. London, Sage, 1988.	2
		Empowerment	French, W L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990	1
		Conflict	French, W L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990	1
		Case Lets & Case Study	University Question Papers	2
Unit No - V		Organizational Effectiveness – Creativity and Innovation	Abad, Ahmad. Etc. Developing Effective Organization. New Delhi, Sri Ram Centre for Industrial Relations, 1980.	1
		Corporate Governance	French, W L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990.	1
		Management of Gender Issues	French, W L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990.	2
		Case Lets & Case Study	University Question Papers	2
Total Lectures required to Cover Syllabus				34

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies, PRMIT&R, Badnera-Amravati.
Lesson Plan Year 2020-2021
Subject: Principle and Practices of Management (101)
Subject Teacher: Prof. S. A. Pachkhede

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	The Concept of Management	T. Ramasamy, Principles of Management, 9th edition, Himalaya Publishing House, Mumbai, 2009	1	Total Lectures for Unit I: 7
	2	Development of management thought-various, approaches		1	
	3	Mathematical, Behavioral, Scholastic schools of management and systems		1	
	4	Contingency approaches to Management		1	
	5	Contribution of Taylor		1	
	6	Contribution of Fayol & Elton Mayo		1	
	7	Case study		1	
II	1	The Nature and Purpose of Planning, Objectives of Planning,	T. Ramasamy, Principles of Management, 9th edition, Himalaya Publishing House, Mumbai, 2009	2	Total Lectures for Unit II: 8
	2	Planning Premises, Policies, Procedures and Methods;		2	
	3	Forecasting and Planning, Planning Process,		2	
	4	The Process of Decision Making.		1	
	5	Case Study		1	
III	1	Organizing: Nature and Purpose of Internal Organization of Business Enterprise	Singh, Dalip Emotional Intelligence at Work, Response Books, Sage Publications, Delhi 2001. T. Ramasamy, Principles of Management, 9th edition, Himalaya Publishing House, Mumbai, 2009	1	Total Lectures for Unit III: 8
	2	Principles of Organizing; Span of Management		1	
	3	Departmentation Line and Staff Authority relationship; Service departments		2	
	4	Centralization vs. Decentralization of authority; Delegation of Authority		2	
	5	Committees, Staffing		1	
	6	Case Study		1	
IV	1	Directing, Nature of Directing, Leadership Concept and Styles	T. Ramasamy, Principles of Management, 9th edition, Himalaya Publishing House, Mumbai, 2009	2	Total Lectures for Unit IV: 7
	2	Motivation Concept, Theory: Maslow, Hertzberg, Supervision		2	
	3	Concept of Communication, Coordination; Need & Principles.		2	
	4	Case Study		1	
V	1	Control; Process of Control; Techniques and Tools	T. Ramasamy, Principles of Management, 9th edition, Himalaya Publishing House, Mumbai, 2009	2	Total Lectures for Unit V: 6
	2	Management by objectives		1	
	3	Participative Management		1	
	4	Management by exception		1	
	5	Case Study		1	
			Total Lectures Required	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies(M.B.A.)
Semester – (Session 2021-2022)
Subject: Quantitative Methods
SUBJECT TEACHER: Prof. G. S. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to Mathematical Derivatives	Business Statistics by S.P. Gupta and M.P.Gupta , Fundamentals of Operations Research Macmillan By Sharma.	1	Total Lectures for Unit I: 7
	2	Introduction to Quantitative Methods applications		2	
	3	importance, scope, limitations		2	
	4	Types		1	
	5	Revision		1	
II	1	Arithmetic Progression	Business Statistics by S.P. Gupta and M.P.Gupta , Fundamentals of Operations Research Macmillan By Sharma.	2	Total Lectures for Unit II: 8
	2	Geometric Progression		2	
	3	Harmonic Progression & their managerial application.		2	
	4	Determinants & Matrices		1	
	5	Revision		1	
III	1	Frequency Distribution & their analysis	Business Statistics by S.P. Gupta and M.P.Gupta , Fundamentals of Operations Research Macmillan By Sharma.	2	Total Lectures for Unit III: 7
	2	Measures of Central tendency		2	
	3	Measures of Dispersion.		2	
	4	Revision		1	
IV	1	Correlation & Regression analysis	Business Statistics by S.P. Gupta and M.P.Gupta , Fundamentals of Operations Research Macmillan By Sharma.	3	Total Lectures for Unit IV: 6
	2	Time series Analysis & forecasting		2	
	3	Revision		1	
V	1	Linear Programming: Formulation & Graphical solution method	Linear Programming and Decision Making By Narag, Business Statistics by S.P. Gupta and M.P.Gupta ,	2	Total Lectures for Unit V: 8
	2	Probability theory		2	
	3	types, distributions		2	
	4	Bi-nomial, Poisson & Normal		1	
	5	Revision		1	
			Total Lectures Required:	**36**	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Concept, Nature and Scope of Business	Essentials of Business Environment by K. Aswathappa Business Environment by Fernando Pearson	1	Total Lectures for Unit I: 7
	2	Business Organization, Industry and Types		1	
	3	Economy-Industry-Company Interface-Case study		2	
	4	Relevant Environment		1	
	5	Case Study		2	
II	1	Business Environment- Introduction & Case study	Essentials of Business Environment by K. Aswathappa & Business Environment by Vivek Mittal & Francis Cherunilam, : Business Environment Text & Cases, Himalaya Publishing House	1	Total Lectures for Unit II: 7
	2	Detailing the Types of Environment		2	
	3	Controllable and Non Controllable		1	
	4	External and Internal Environment		1	
	5	Case Study		2	
III	1	Business & Society, Social Audit of Business	Essentials of Business Environment by K. Aswathappa & Business Environment by Fernando Pearson	2	Total Lectures for Unit III: 8
	2	Foreign Direct Investment		2	
	3	Economic Zones: SEZ, REZ, AEZ		2	
	4	Case Study		2	
IV	1	Business in Post LPG Scenario	Essentials of Business Environment by K. Aswathappa & Business Environment by Vivek Mittal & Francis Cherunilam, : Business Environment Text & Cases, Himalaya Publishing House	1	Total Lectures for Unit IV: 7
	2	Disinvestment		1	
	3	WTO Agreements		2	
	4	Business & Regional Blocks		1	
	5	Case Study		2	
V	1	Financial Sector Reforms	Essentials of Business Environment by K. Aswathappa & Business Environment by Vivek Mittal & Francis Cherunilam, : Business Environment Text & Cases, Himalaya Publishing House	1	Total Lectures for Unit V: 7
	2	Fiscal and Monetary Sector Reforms , ,		1	
	3	Economic Reforms		1	
	4	Social Justice		1	
	5	Business Environment Issues- Tourism and Hospitality Industry		1	
	6	Health Care and Knowledge Industry		1	
	7	Case Study		1	
			Total Lectures Required:	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Management Studies(M.B.A.)

Lesson Plan
Subject: Financial Management
Semester –II (Session 2017-2018)
Subject Teacher: Prof. G.D. Pachaghare

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Financial Management-Aims & Objectives	Prasanna Chandra, "Financial Management-Theory and Practice", Tata McGraw Hill 4th, 5th, 6th , 7th Ed	1	Total Lectures for Unit I: 08
	2	Financial Analysis Techniques		2	
	3	Financial control: Cost-Volume Profit Analysis		2	
	4	Financial control: Operating & Financial Leverage		2	
	5	Case study		1	
II	1	Investment & capital structure Decisions	Bhalla V.K.: Financial Management and Policy 2nd ed. New Delhi Anmol, 1998.	2	Total Lectures for Unit II: 07
	2	Optimum Capital structure		2	
	3	Time -value of money		2	
	4	Case Study		1	
III	1	Instruments of Short term Financing	Financial Management, 6th ed., Tata McGraw Hill Education Pvt. Ltd. 2012.	1	Total Lectures for Unit III: 06
	2	Instruments of Long term Financing		1	
	3	Cost of different sources of raising capital		2	
	4	Weighted Average cost of capital		1	
	5	Case Study		1	
IV	1	Valuations Bonds & Stocks	Prasanna Chandra, "Financial Management-Theory and Practice", Tata McGraw Hill 4th, 5th, 6th , 7th Ed	2	Total Lectures for Unit IV: 8
	2	Rates of return		2	
	3	Methods of Capital Budgeting		2	
	4	Case Study		2	
V	1	Management and Estimation of Working Capital	Working Capital management. Dr. P.Periasamy, Himalaya Publication.	2	Total Lectures for Unit V: 7
	2	Internal Financing		1	
	3	Dividend Policy	Bhalla V.K.: Financial Management and Policy 2nd ed. New Delhi Anmol, 1998	2	
	5	Case Study		2	
			Total Lectures Required	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –II (Session 2017-2018)

Subject: Human Resource Management

Subject Teacher: Prof. M.M.Nistane

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	HRM Scenario and Acquisition of Human Resources	Human Resource Management:P.Subba Rao	2	
	2	HRM the global and Indian Scenario, excellence		1	
	3	Human resource planning.		1	
	4	Human resource information system..		1	
	5	Recruitment and selection strategies		1	
	6	Case Let		1	
		Total		7	
II	1	Developing Human Resources- HRD-Concept, Multiple Goals	Human Resource Management:P.Subba Rao	2	Page. No: 23-25, 115-121, 131-137, 180-186, 152-168,
	2	Functions And Organizational Effectiveness		1	
	3	Performance Appraisal System		1	
	4	Potential Appraisal System And Succession Planning		1	
	5	Career Planning And Development		1	
	6	Assessment And Development Centers , Training And Development.		1	
	7	Videos, Case Lets		1	
		Total		8	
III	1	Motivating Human Resources: Motivation At Work-Concept,	Human Resource Management:P.Subba Rao,	2	256-264, 393-397, 63-65,
	2	Objectives, Types And Applications		1	
	3	Participative Management-Approaches And Applications		1	
	4	Employee Empowerment-Concept, Nature,		2	
	5	Objectives, Schemes And Applications.		1	
	6	Case Lets		1	
		Total		8	
IV	1	Maintenance of Human Resources	Human Resource Management:P.Subba Rao,	2	**201-208**
	2	Reward System		1	
	3	Quality of Work Life		1	
	4	Organisation Development		1	
	5	Case Let		1	
				6	
IV	1	Human Resources and Knowledge Era	Human Resource Management:P.Subba Rao,	1	**201-208**
	2	Knowledge Creation and Management		1	
	3	Virtual Organizations and HR Trends		1	
	4	Learning Organizations		1	
	5	Strategic Human Resource Management		1	
	6	International HRM-some Key issues.		1	
	7	Case Let		1	
		Total		7	
		Schedule Lecture		**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Management Studies(M.B.A.)

Lesson Plan
Subject: Logistic Management
Semester –II (Session 2017-2018)
Subject Teacher: Prof. G.D. Pachaghare

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to logistics	Christopher M, Logistics and Supply Chain Management: Strategies for Reducing Costs and Improving Services, London, Pitsman, 1992.	1	Total Lectures for Unit I: 6
	2	Logistics interface with Production and Marketing		1	
	3	Performance Measures of Logistics		2	
	4	Reverse Logistics		1	
	5	Case study		1	
II	1	Logistics and Distribution System	Shridhar Bhat, Logistics & Supply Chain Management, Pearson Education, 2009	1	Total Lectures for Unit II: 8
	2	Logistics System Analysis and Design		2	
	3	Warehousing and Distributing Centers		2	
	4	Channels Management-Policies		1	
	5	Information Systems		1	
	6	Case Study		1	
III	1	Location; Transportation Systems	Ballon Ronald, Business Logistics/ Supply Chain Management, Pearson Education	1	Total Lectures for Unit III: 9
	2	Transportation Management		3	
	3	Transportation Infrastructure Facilities and Services		2	
	4	Dispatch and Routing Decisions and Models		2	
	5	Case Study		1	
IV	1	Inventory Management Decisions	Shapiro, R., Logistics Strategy: Cases and Concepts, St. Paul, West, 1995.	2	Total Lectures for Unit IV: 5
	2	Logistics Audit and Control		1	
	3	Packaging and Logistical Materials Handling		1	
	4	Case Study		1	
V	1	International Logistic Management	Christopher M, Logistics and Supply Chain Management: Strategies for Reducing Costs and Improving Services, London, Pitsman, 1992.	2	Total Lectures for Unit V: 8
	2	Global Logistics: Barriers, Drivers		1	
	3	Global Logistics: Export & Import Documentation		2	
	4	Regional Integration		1	
	5	Logistic Outsourcing		1	
	6	Case Study		1	
			Total Lectures Required	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Nature & Scope of Marketing	**Marketing Management- Kotler, Koshy & Jha; Marketing Management-Text & Cases- Dr.K. Karunakaran**	1	
	2	Functions of Marketing Management		2	
	3	Marketing organisation		2	
	4	Corporate Orientation towards the Market Place		1	
	5	Marketing Environment & Environment Scanning		1	
	6	Case Study		1	
		Total Lectures		**8**	
II	1	Meaning & Significance of Marketing Planning	**Marketing Management- Kotler, Koshy & Jha; Marketing Management-Text & Cases- Dr.K. Karunakaran**	1	
	2	Strategic Planning		2	
	3	Planning of Marketing Mix Elements		2	
	4	Market Segmentation		1	
	5	Positioning		1	
	6	Case Study		1	
		Total Lectures		**8**	
III	1	Product Decisions, Product Mix	**Marketing Management- Kotler, Koshy & Jha; Marketing Management-Text & Cases- Dr.K. Karunakaran**	1	
	2	Product Life Cycle		2	
	3	New Product Development		1	
	4	Branding & Packaging Decisions		2	
	5	Pricing Model & Strategies		1	
	6	Case Study		1	
		Total Lectures		**8**	
IV	1	Physical Distribution Decisions & Targetting	**Marketing Management- Kotler, Koshy & Jha; Marketing Management-Text & Cases- Dr.K. Karunakaran**	2	
	2	Major Channels		1	
	3	Channels of Consume Product		1	
	4	Channels of Industrial Product		1	
	5	Case Study		1	
		Total Lectures		**6**	
V	1	Promotion Mix	**Marketing Management- Kotler, Koshy & Jha; Marketing Management-Text & Cases- Dr.K. Karunakaran**	1	
	2	Advertising		1	
	3	Sales Promotions		1	
	4	Publicity & Personal Selling		1	
	5	Introduction to Marketing Research & its Signficance		1	
	6	Case Study		1	
		Total Lectures		**6**	

36

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Unit No.	Topic No.	Topics with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Basic Concept of Management Science	Budnik, Frank S. Dennis, Mcleavey, Richard Mojena Principles of Operations Research 2nd ed. Richard, Irwin, Illinois-All India Traveller Bookseller, New Delhi, 1995	2	Total Lectures for Unit I: 8
	2	Role of Management Science in Decision Making-		2	
	3	Decision Theory		2	
	4	Decision Tree		2	
II	1	Integer Linear Programming	Sharma J.K. Operations Research: Theory and Applications New Delhi, Macmillan India Ltd. 1997	2	Total Lectures for Unit II: 6
	2	Branch & Bound Algorithm		2	
	3	Sensitivity Analysis		2	
III	1	Transportation Model	Sharma J.K. Operations Research: Theory and Applications New Delhi, Macmillan India Ltd. 1997	3	Total Lectures for Unit III: 7
	2	Assignment Model		4	
IV	1	Network Analysis-Pert	Sharma J.K. Operations Research: Theory and Applications New Delhi, Macmillan India Ltd. 1997	4	Total Lectures for Unit IV: 8
	2	Network Analysis-CPM		4	
V	1	Markov Chain Analysis-I	Budnik, Frank S. Dennis, Mcleavey, Richard Mojena Principles of Operations Research 2nd ed. Richard, Irwin, Illinois-All India Traveller Bookseller, New Delhi, 1995,	2	Total Lectures for Unit V: 7
	2	Game Theory		3	
	3	Simulation-I		2	
Total Lectures Required:				**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Subject: Production & Operations Management   Subject Teacher:Prof.S.B.Diwan

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1. 2. 3. 4.	Nature & scope of Production & Operations Management. Facility Location, Types of Manufacturing Systems Plant Layout; Types, Planning & Analysis Case Study	Chary S.N. , Adam & Ebert R.S. Goel Scholarly articles;	2 2 2 1	
II	1. 2. 3. 4. 5.	Production Planning & Control; Objectives, Functions, Production Planning, Production Control, Role of PPC. Production Scheduling Industrial Safety Case Study	M. Mahajan R.S Goel Chary S.N. ; Scholarly articles;	3 2 1 1	
III	1. 2. 3. 4	Capacity planning- Measures, strategies, Aggregate Planning, Quality assurance, Quality control, Statistical quality control- concept & types of control charts. TQM- ISO 9000, Quality circles. Case Study	Martand Telsang Chary S.N.; Mahajan	3 2 2 1	
IV	1. 2. 3. 4.	Work Study: Importance, scope, work content, method study- steps, data recording techniques, motion economy. Work measurement- Scope, computation of standard time, work sampling. Maintenance management- Objectives, scope, types of maintenance, maintenance organization Case Study	Martand Telsang M. Mahajan	2 2 2 1	
V	1. 2. 3.	Materials Handling- Principles, types of material handling equipment & their applications, Purchase management, Stores management. Inventory control- objectives, scope, inventory models & their applications. Case Study	Chunawalla R.S. Goel Adam & Ebert	3 3 1	

Note: No of available session are 36 & include at least one case study in each unit

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to research methodology	Research Methodology By Dr. S.L. Gupta & Hitesh Gupta Business Research Methodology J.K. Sachdeva	1	7
	2	Research and Scientific Method		1	
	3	Nature and Scope of research methodology		1	
	4	Problem & Hypothesis formulation		1	
	5	Research objectives		1	
	6	Value & cost of information		1	
	7	Case study/Numerical		1	
II	1	Organisation structure for research	Research Methodology By Dr. S.L. Gupta & Hitesh Gupta Research Methodology By C.R. Kothari	1	7
	2	Research process		2	
	3	exploratory research, descriptive & experimental research design		2	
	4	Research Agencies-Government and Non Government		1	
	5	Case study/Numerical		1	
III	1	Data-Types of Data	Research Methodology By C.R. Kothari Business Research Methodology J.K. Sachdeva	1	7
	2	Methods of primary data collection, observation, questionnaire, interview, survey method		1	
	3	Modern tools of data collection		1	
	4	Schedules, tabulation, analysis and interpretation of primary data		2	
	5	Case study/Numerical		2	
IV	1	Attitude measurement Techniques	Research Methodology By Dr. S.L. Gupta & Hitesh Gupta Business Research Methodology J.K. Sachdeva	1	6
	2	Motivational Research Techniques.		1	
	3	Sample Design		1	
	4	Selection of Appropriate Statistical Techniques.		1	
	5	Case study/Numerical		2	
V	1	Testing of Hypothesis	Business Research Methods By Naval Bajpai Research Methodology By C.R. Kothari	2	8
	2	Use of Statistical software		1	
	3	Factor analysis		1	
	4	conjoint analysis		1	
	5	Regression analysis,		1	
	6	Qualities of optimally viable research report		1	
	7	Case study/Numerical		1	
			TOTAL:36		

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted
I	1 2 3 4	Banking system in India-Indigenous Bankers, Commercial Banks, Co-operative Banks, Regional Rural Banks-Private Sector Banks, Foreign Banks, Merchant Banking, Banking Sector Reforms, Primary, Secondary and Subsidiary Functions of Banks, Banking Innovation, Globalization of Indian Banking Sector, Banking in New Millennium.	Gordon-Natrajan, Banking Theory, Law and Practice, Himalaya Publishing House	1 1 2 2 1
		Total		**07**
II	1. 2. 3.	Banking Regulation-Banking business, Capital requirement, management, licensing, new branches, loans and advances, NPA'S, Acquisition of Business, Winding up andAmalgamation, major issues of banking, Bank Management.	Vasant Desai, Bank Management, Himalaya Publishing House.	3 2 2
		Total		**07**
III	1. 2. 3. 4.	Central Banking: Concept and Meaning, Major CentralBanks, Reserve Bank of India, it's role and functions, Banking Regulation by RBI,RBI & Agricultural Credit, Industrial Finance and Bill Market System.	S. Gurusamy, "Banking Theory: Law and Practices," Tata McGraw Hill 2nd Ed., 2009.	2 1 1 2
		Total		**07**
IV	1. 2. 3. 4.	Commercial Banking: Concept and Scope, Commercial Banking Risk Management Functions and Services of Commercial Banks, Credit Management,Installation and Significance of Sound Credit Culture	Gordon-Natrajan, Banking Theory, Law and Practice, Himalaya Publishing House	2 2 1 3
		Total		**08**
V	1. 2. 3. 4.	Upcoming Issues in Banking, Customer Services, CRM, Human Resource Management, Financial Management, Marketing Management of banking services, New Trend in Banking	Vasant Desai, Bank Management, Himalaya Publishing House.	3 1 1 2
		Total		**06**

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies
Semester –III (Session 2020-2021)
Subject: MBA/301 BUSINESS LAW
SUBJECT TEACHER: Prof. P. A. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	The Indian Contracts Act 1872; Essentials of a valid contract	Business Law- S S Gulshan Business Law- S. N. Maheshwari Mercantile Law- N. D. Kapoor ICAI Notes	1	Total Lectures for Unit I: 8
	2	Void agreements - cases		2	
	3	Performance of contract		2	
	4	Breach of contract and its remedies		1	
	5	Quasi contracts – condition with cases		1	
	6	Case Study		1	
II	1	The sale of Goods Act 1930 introduction	Business Law- S S Gulshan Business Law- S. N. Maheshwari Mercantile Law- N. D. Kapoor	1	Total Lectures for Unit II: 7
	2	Essential features-sale & agreement		1	
	3	Types of goods-condition& warranty-cases		1	
	4	Passing of property & Formation of Contract		2	
	5	Rights of an unpaid seller		1	
	6	Case Study		1	
III	1	The Negotiable Instruments Act 1881: Nature of negotiable instruments,	Business Law- S S Gulshan Business Law- S. N. Maheshwari Mercantile Law- N. D. Kapoor ICAI Notes	2	Total Lectures for Unit III: 7
	2	Type of negotiable instruments		1	
	3	Negotiation and assignment, Holder in due course		1	
	4	Dishonor and discharge of negotiable instrument		2	
	5	Case Study		1	
IV	1	The Companies Act 1956: Nature And Type Of Companies	Business Law- S S Gulshan Business Law- S. N. Maheshwari Mercantile Law- N. D. Kapoor	2	Total Lectures for Unit IV: 7
	2	Formation of companies		1	
	3	Memorandum and Article of Association		1	
	4	Winding up of companies-Cases		2	
	5	Case Study		1	
V	1	An overview of Consumer Protection Act 1986	Business Law- S S Gulshan Business Law- S. N. Maheshwari Mercantile Law- N. D. Kapoor	2	Total Lectures for Unit V: 7
	2	IT Act 2000		1	
	3	Cyber laws with specific reference to e-commerce		1	
	4	Intellectual Property Law		1	
	5	Patents and copyright.		1	
	6	Case Study		1	
			Total Lectures Required: 36		

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Management Studies

Lesson Plan

Subject: International Financial Management
Semester –IIIrd (Session 2020-2021)
Subject Teacher: Prof. G.D. Pachaghare

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Multinational Financial Management - An overview	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol 2001.	2	Total Lectures for Unit I: 5
	2	Evolution of the International Monetary and Financial System.		2	
	3	Case study		1	
II	1	Managing short-term assets and liabilities	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol 2001.	2	Total Lectures for Unit II: 8
	2	Long-term Financing		1	
	3	Long-run Investment Decisions		2	
	4	The foreign Investment Decision.		2	
	5	Case Study		1	
III	1	Cost of Debt, Cost of Capital,	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol 2001.	3	Total Lectures for Unit III: 7
	2	Weighted Average Cost of Capital		1	
	3	Capital Structure of the Multinational Firm.		2	
	4	Case Study		1	
IV	1	Multinational Capital Budgeting Application and Interpretation	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol 2001.	2	Total Lectures for Unit IV: 8
	2	Dividend Policy of the Multinational Firm		2	
	3	Taxation of the Multinational Firm		2	
	4	Case Study		2	
V	1	Analysis of Country Level Risk	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol 2001.	2	Total Lectures for Unit V: 8
	2	Political Risk Management		2	
	3	Foreign Exchange Operating Exposure		1	
	4	Debt and Foreign Exchange Exposure		2	
	5	Case Study		1	
			Total Lectures Required	**36**	

Department of Management Studies

Semester –III (Session 2020-2021)

Teaching Plan

Subject: Indian Financial System

Subject Teacher: Prof. N. M. Gawande

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Structure of Indian financial system	Vasant Desai.:- Fundamentals Indian financial system HPH	02	
	2	Functions of Indian financial system		01	
	3	Economic development and major issues in IFS		01	
	4	Saving Investment and capital accumulation		01	
	5	Case study		01	
Total Lecture				**06**	
II	1	Working of financial Markets	Bharti V Pathak:- Indian financial system Markets, Institutions and Services Pearson Education M Vora :- Indian financial system Anmol Publications	01	
	2	Trends of Money Market		01	
	3	Capital Market		02	
	4	Debt Market		01	
	5	Bill Market		01	
	6	Foreign Exchange Market		01	
	7	Case study		01	
Total Lecture				**08**	
III	01	Role and significance of stock exchanges	Bharti V Pathak:- Indian financial	01	

	02	NSE	system Markets, Institutions and Services Pearson Education	02	
	03	BSE		02	
	04	Discount and finance house of India and OTC		01	
	05	SEBI	M Vora :- Indian financial system Anmol Publications.	01	
	06	Case study		01	
Total Lecture				**08**	
IV	01	Working and function of RBI	Bharti V Pathak:- Indian financial system Markets, Institutions and Services Pearson Education	01	
	02	Commercial banking		01	
	03	Non –banking financial institutions and companies		01	
	04	Development bank		01	
	05	Life insurance	M Y Khan:- Indian financial system Tata McGraw Hill.	02	
	06	General insurance		01	
	07	Case Study		01	
Total Lecture				**08**	
V	01	Features and importance of treasury bills	Bharti V Pathak:- Indian financial system Markets, Institutions and Services Pearson Education	01	
	02	Certificates of deposits		01	
	03	Commercial paper		01	
	04	Hawala	Vasant Desai.:- Fundamentals Indian financial system HPH	01	
	05	Case study		01	
Total Lecture				**05**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –III (Session 2020-2021)

Teaching Plan

Subject: Investment Science

Subject Teacher: Prof. K. S. Bijawe

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	01	Investment - Introduction , Significance	Preeti Singh, Investment Management, Himalaya Publishing House.	01	
	02	Saving , Investment , Gambling		01	
	03	Meaning , Objectives, and significance & Mechanism of Investment		01	
	04	Issue and dilemmas of investment		01	
	05	Investment option and opportunities		01	
	06	Investment risk and return		01	
	07	Indian Investment Scenario		01	
	08	Case Study and Situation		01	
Total Lecture				08	
II	01	Financial Market	Preeti Singh, Investment Management, Himalaya Publishing House.	01	
	02	Financial Market and Intermediaries		01	
	03	Money Market		01	
	04	Stock Market Function		01	
	05	Stock Market Indices		01	
	06	Stock Market and Economic Scenario		01	
	07	Case Study , Situation		01	
Total Lecture				07	
III	01	Theory of Interest	Preeti Singh, Investment Management,	01	
	02	Time Value Consideration		01	

	03	Evaluation of Investment of opportunities		01	
	04	NPV	Himalaya Publishing House.	01	
	05	IRR		01	
	06	NPV Vs IRR		01	
Total Lecture				06	
IV	01	Investment Valuation	Preeti Singh, Investment Management, Himalaya Publishing House.	01	
	02	Valuation of Debt securities		01	
	03	Bond Valuation		01	
	04	YTM		02	
	05	Valuation of Debenture		01	
	06	Tax Consideration in Investment		01	
Total Lecture				07	
V	01	Valuation of Share Investment	David G. Luenberger, Investment Science, Oxford University Press.	01	
	02	Valuation of Preference Share		01	
	03	Valuation of Equity Share		02	
	04	Dividend Valuation Model		02	
	05	Case Study		01	
Total Lecture				07	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –III (Session 2020-2021)

Teaching Plan

Subject: Risk Management

Subject Teacher: Prof. S. A. Pachkhede

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	01	Risk - Meaning, Definition and Significance	Anthony Sounders, Merica Cornett, "Financial Institutions Management:- A Risk Management Approach"' Tata McGraw Hill.	01	
	02	Risk Management		01	
	03	Impact of Risk on Organization		01	
	04	Types of Risk		01	
	05	Development of Risk Management		01	
	06	Risk Management , Principal , objectives and standards and policy		01	
	07	Risk Management Documentation and responsibility		01	
	08	Case study		01	
Total Lecture				**08**	
II	01	Risk Assessment	Anthony Sounders, Merica Cornett, "Financial Institutions Management:- A Risk Management Approach"' Tata McGraw Hill.	01	
	02	Risk architecture and structure		01	
	03	Risk-aware culture , risk training and communication		01	
	04	Risk assessment consideration		01	
	05	Risk classification system		01	
	06	Risk likelihood and impact, upside of risk		01	
	07	Case study		01	
Total Lecture				**07**	
III	01	Risk and organization		01	
	02	Corporate Governance Model	Anthony	01	

	03	Stakeholder expectations, analysis of the business model	Sounders, Merica Cornett, "Financial Institutions Management:- A Risk Management Approach"' Tata McGraw Hill.	01	
	04	Project and operational risk Management		01	
	05	Supply Chain Management		01	
	06	Case study		01	
Total Lecture				**06**	
IV	01	Risk response, enterprise risk management	Anthony Sounders, Merica Cornett, "Financial Institutions Management:- A Risk Management Approach"' Tata McGraw Hill.	01	
	02	Importance of risk appetitive		01	
	03	Tolerate, Treat, Transfer and Terminate		01	
	04	Risk control Techniques		01	
	05	Control of selected hazard risks,		01	
	06	Insurance and risk transfer		01	
	07	Case Study , situation		01	
Total Lecture				**07**	
V	01	Risk assurance and reporting	Anthony Sounders, Merica Cornett, "Financial Institutions Management:- A Risk Management Approach"' Tata McGraw Hill.	01	
	02	Evaluation of the control environment		01	
	03	Activities of the internal audit function		01	
	04	Risk assurance techniques		01	
	05	Reporting of risk management		01	
	06	Corporate social responsibility and Future of Risk Management		01	
	07	Case study		01	
Total Lecture				**07**	

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Management Studies

Lesson Plan
Subject: Working Capital Management
Semester –IIIrd (Session 2020-2021)
Subject Teacher: Prof. G.S. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Concept of Working Capital Management	Bhalla, V.K., Working Capital Management: Text and Cases, 4th ed., Delhi, Anmol, 2001.	1	Total Lectures for Unit I: 8
	2	Importance of Working Capital, Kinds of Working Capital		1	
	3	Factors Determining Working Capital, Estimating Working Capital Requirements		3	
	4	Operating Cycle		1	
	5	Case study		2	
II	1	Management of Cash-Motives for Holding Cash and marketable securities	Bhalla, V.K., Working Capital Management: Text and Cases, 4th ed., Delhi, Anmol, 2001.	2	Total Lectures for Unit II: 6
	2	Cash System		1	
	3	Managing the Cash Flows		2	
	4	Case Study		1	
III	1	Managing Corporate Liquidity and Financial Flexibility	Bhalla, V.K., Working Capital Management: Text and Cases, 4th ed., Delhi, Anmol, 2001.	2	Total Lectures for Unit III: 7
	2	Measures of Liquidity		1	
	3	Determining the Optimum Level of Cash Balances - Baumol Model		2	
	4	Benanek Model		1	
	5	Case Study		1	
IV	1	Inventory Management-Kinds of Inventories	Bhalla, V.K., Working Capital Management: Text and Cases, 4th ed., Delhi, Anmol, 2001.	1	Total Lectures for Unit IV: 8
	2	Benefits and Cost of holding Inventories		2	
	3	Inventory Management and Valuation		2	
	4	Inventory Control Models		2	
	5	Case Study		1	
V	1	Receivables Management, Objectives	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol 2001.	2	Total Lectures for Unit V: 7
	2	Credit Policies		2	
	3	Credit Terms and Collection Policies		2	
	4	Case Study		1	
		Total Lectures Required		**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

		Department of Management Studies		
		Semester –III (Session 2020-2021)		
		Lesson Plan		
		Subject: Compensation Management	**Teacher: Yuvaraj Vaidya**	
Unit No.	**Topic No.**	**Topic with detail course outlines**	**Text and References**	**No. of Periods Allotted**
I	1	Compensation Management: Concept	Compensation Management by Dr Kanchan Bhatia	2
	2	Components	Compensation by G. Milkovich, J. Newman & C Ratnam	1
	3	Theories	Compensation Management by Dr Kanchan Bhatia	1
	4	Reward Management	Compensation Management by Dr Kanchan Bhatia	2
	5	Case Study	University Question Papers	1
II	6	Diagnosis of compensation problem	Compensation Management by Dr Kanchan Bhatia	2
	7	Meaning and necessity of Benchmarking	Compensation Management by Dr Kanchan Bhatia	2
	8	commitments	Salary and wages Administration	1
	9	Internal & external equity in compensation system	Compensation by G. Milkovich, J. Newman & C Ratnam	2
	10	Case study	University Question Papers	1
III	11	Compensation Packages	Compensation by G. Milkovich, J. Newman & C Ratnam	2
	12	Tools in Designing Compensation Packages	Compensation by G. Milkovich, J. Newman & C Ratnam	1
	13	Implementing Compensation Packages	http://www.busgurus.ca/media/pdf/Compensation-Plans-en.pdf	1
	14	Improving Compensation Packages	http://businessfinancemag.com/hr/6-ways-improve-compensation-management	
	15	Designing	Compensation by G. Milkovich, J. Newman	2

		Compensations Packages	& C Ratnam	
	16	Case Study	University Question Papers	1
IV	17	Components of compensation	Compensation by G. Milkovich, J. Newman & C Ratnam	2
	18	Fringe Benefits	Compensation by G. Milkovich, J. Newman & C Ratnam	2
	19	Incentives	Compensation by G. Milkovich, J. Newman & C Ratnam	1
	20	Retirement Benefits	Compensation Management by Dr Kanchan Bhatia	1
	21	Case Study	University Question Papers	1
V	22	Strategic Compensation System	Compensation by G. Milkovich, J. Newman & C Ratnam	2
	23	compensation practices of public limited	Compensation by G. Milkovich, J. Newman & C Ratnam	1
	24	compensation practices of institutional	Salary and wages Administration	1
	25	corporate & public sector companies.	Compensation by G. Milkovich, J. Newman & C Ratnam	2
	26	Case Study	University Question Papers	1

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies - Semester –III (Session 2020-2021) - Teaching Plan
Subject: HR-3304/ Human Resource Development
Subject Teacher: Prof. Minal M.Nistane.

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1.	HRD- Concept & Goals	1. HRD - BY Rao T.V.	01	
	2.	Challenges (A Case of video Challenges)		01	
	3.	Climate (Videocon)	2. HRD –Dr.Lalitha	01	
	4.	Practices in India (Practical Ex.of Patanajali)	Balakrishnan,S Srividhya	01	
	5.	Learning and HRD		01	
	6.	Case Study	3. HRD – By P. Subba Rao	02	
		Total		**07**	
II	1.	HRD System Design		01	
	2.	Assessing HRD Needs	1. HRD - BY Rao T.V.	01	
	3.	Designing & Implementing HRD Programs		01	
	4.	Case Let	2. HRD –Dr.Lalitha	01	
	5.	Evaluating HRD Program (Ex. Wipro co.)	Balakrishnan,S Srividhya	01	
	6.	Case Let		01	
	7.	Staffing & HRD Function	3. HRD – By P. Subba Rao	01	
	8.	Case Let		01	
		Total		**08**	
IV	1.	Career Management Development		01	
	2.	Concept, Objectives	1. HRD - BY Rao T.V.	01	
	3.	Relevance & Process	2. HRD – By Werner Desimone	01	
	4.	Case Let		01	
	5.	Career & Succession Planning (Ex.**Google**)	3. HRD – By P. Subba Rao	01	
	6.	Case Let		01	
	7.	Post Retirement Planning		01	
		Total		**07**	
III	1.	HRD Strategies for Employee (Introduction)		02	
	2.	Case Let	1. HRD – By Werner Desimone	01	
	3.	Employee Socialization & Orientation		01	
	4.	Case Let	2. HRD – By P. Subba Rao	01	
	5.	HRD Intervention		01	
		Total		**06**	
V	1.	Counseling		01	
	2.	Coaching	1. HRD - BY Rao T.V.	01	
	3.	Mentoring & Performance Mgt.	2. HRD –Dr.Lalitha	01	
	4.	HRD & Organizational Change	Balakrishnan,S Srividhya	01	
	5.	HRD & Diversity in Work Force	3. HRD – By P. Subba Rao	01	
	6.	HRD Audit & Accounting		01	
	7.	Case Study - 2		**02**	
		Total		**08**	
		Total Lectures		**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

			Department of Management Studies	
			Department of Management Studies	
			Semester – III (Session 2020-2021)	
			Lesson Plan	
			Subject – Human Relations & Legal Framework Teacher: Y R Vaidya	
Uni t No.	**Topi c No**	**Topic**	**Text and References**	**No. of Period s Allotte d**
I	1	Labour Laws Introduction	http://www.lawyersclubindia.com/articles/Brief-Overview-of-Labour-Laws-in-India-6040.asp#.Vad9S19Viko	2
	2	Objectives & Importance of Labour Laws	http://www.yourarticlelibrary.com/law/necessity-and-importance-of-labour-law-and-principles/34381/	2
	3	Socio Economic Environment of Labor Laws	http://dyuthi.cusat.ac.in/xmlui/bitstream/handle/purl/2788/Dyuthi-T0809.pdf?sequence=1	1
	4	(Case Study)	University Question Papers	1
II	5	Laws Relating to Industrial Disputes	Legal Aspectes of Business, R S Pillai & Bhagvathi	1
	6	Trade Union	Legal Aspectes of Business, R S Pillai & Bhagvathi	2
	7	Standing Orders	Legal Aspectes of Business, R S Pillai & Bhagvathi	2
	8	Law Relating to Discharge	http://www.lawteacher.net/free-law-essays/employment-law/misconduct-as-a-ground-for-ermination-of-employment-law-essay.php	1
	9	Misconduct	http://www.lawteacher.net/free-law-essays/employment-law/misconduct-as-a-ground-for-ermination-of-employment-law-essay.php	1
	10	Domestic Enquiry – Disciplinary Action	http://www.lawyersclubindia.com/articles/Disciplinary-Actions-4743.asp#.Vad_bF9Viko	2
	11	(Case Study)	University Question Papers	1
III	12	Laws Relating to	Legal Aspectes of Business, R S Pillai & Bhagvathi	2

		Workmen Compensation		
	13	Employee State Insurance Act	Legal Aspectes of Business, R S Pillai & Bhagvathi	1
	14	Provident Fund	http://www.legalissuesforngos.org/main/other/EPF.pdf	1
	15	The Payment of Gratuity Act	Legal Aspectes of Business, R S Pillai & Bhagvathi	1
	16	Maternity Benefits Act	Legal Aspectes of Business, R S Pillai & Bhagvathi	1
	17	(Case Study)	University Question Papers	1
IV	18	The Law of Minimum Wages	Legal Aspectes of Business, R S Pillai & Bhagvathi	2
	19	Payment of Wages	Legal Aspectes of Business, R S Pillai & Bhagvathi	2
	20	Paymentof Bonus.	Legal Aspectes of Business, R S Pillai & Bhagvathi	1
	21	(Case study)	University Question Papers	1
V	22	The Laws Relating to Factories	Legal Aspectes of Business, R S Pillai & Bhagvathi	5
	23	Contract Labor Act. 1970	http://ncw.nic.in/frmReportLaws33.aspx	1
	24	(Case Study)	University Question Papers	1

Department of Management Studies - Semester –III (Session 2020-2021)
Teaching Plan
Subject: HR-3301/ Management of Industrial Relations
Subject Teacher: Prof. Minal M.Nistane.

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1.	IR Introduction (Durga Steel Plant)	1. Industrial Relation- By	01	
	2.	Industrial Relations Perspectives	C.S.Venkata Ratnam	01	
	3.	Importance of IR	2. Ind Relation,Trade Unions &	01	
	4.	Socio Economic Conditions	Labour Legislation - By P.R.N.	01	
	5.	IR & Socio Economic Scenario –I	Sinha,Indu bala	01	
	6.	IR & Socio Economic Scenario –II	Sinha, Seema P.Shekhar	01	
	7.	IR & State, Case Study		01	
		Total		**07**	
II	1.	Role of Trade Union	1. Industrial Relation- By	01	
	2.	Future of Trade Unions	C.S.Venkata Ratnam	01	
	3.	Employee Perspectives	2. Ind Relation,Trade Unions &	01	
	4.	Trade Union & Employees (Maruti	Labour Legislation - By P.R.N.	01	
	5.	Suzuki)	Sinha,Indu bala	01	
	6.	Trade Union & Management	Sinha, Seema P.Shekhar	01	
	7.	Role Of Management		01	
	8.	Trade Union in MNC's.		01	
		Case Let (Video on strike)			
		Total		**08**	
III	1.	Grievance Discipline	1. Industrial Relation- By	01	
	2.	Grievance Conflicts,	C.S.Venkata Ratnam	01	
	3.	Grievance Dispute	2. Ind Relation,Trade Unions &	01	
	4.	Grievance Management,	Labour Legislation - By P.R.N.	01	
	5.	Negotiation	Sinha,Indu bala	01	
	6.	Collective Settlements.	Sinha, Seema P.Shekhar	01	
	7.	Case Let			
		Total		**07**	
IV	1.	Participative Management	1. Industrial Relation- By	01	
	2.	Techniques Scope And Importance	C.S.Venkata Ratnam	02	
	3.	Co-Ownership	2. Ind Relation,Trade Unions &	01	
	4.	Productive Bargaining – I	Labour Legislation - By P.R.N.	01	
	5.	Productive Bargaining - II	Sinha,Indu bala	01	
	6.	Case Study	Sinha, Seema P.Shekhar	01	
		Total		**07**	
V	1.	IR , Employees Empowerment - I	1. Industrial Relation- By	01	
	2.	Employee Empowerment - II	C.S.Venkata Ratnam	01	
	3.	Quality Circles,	2. Ind Relation,Trade Unions &	01	
	4.	IR & Technological Change,	Labour Legislation - By P.R.N.	01	
	5.	Conciliation arbitrations	Sinha,Indu bala	01	
	6.	adjudication	Sinha, Seema P.Shekhar	01	
	7.	Role of labour administration.		**01**	
		Case Study			
		Total		**07**	
		Total Lectures		**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Odd-Semester – III (Session 2020-21)-Teaching Plan

Subject Teacher: Prof.A. V. Deshmukh   Subject: MTD

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Training – a change agent, Video	"Training & Development Methods" by Dr. Rishipal & Scholary Articles	2	
	2	Training Environment		1	
	3	Pre – T raining module-Formats		1	
	4	Counseling for Training,		1	
	5	Training Costs		1	
	6	Training Investment		1	
	7	Case Study		1	
		Total		**08**	
II	1.	Training Functions, Training Needs Assessment	"Training & Development Methods" by Dr. Rishipal & Lynton and Pareek	2	
	2.	Action Research-Module		2	
	3.	Organizational Objectives and Training		2	
	4.	Case Study		1	
		Total		07	
III	1.	Introduction of Learning & Learning Process	"Training & Development Methods" by Dr. Rishipal	2	
	2.	Organizational Training Climate		2	
	3.	Development and Designing Training Modules		2	
	4.	Formats of training Sheet,			
	5	Case Study		1	
		Total		07	
IV	1.	Training Methods	"Training & Development Methods" by Dr. Rishipal & Scholary Articles	2	
	2.	Techniques & Pedagogy		2	
	3.	Training aids & Tools		1	
	4.	Facilities for Training		1	
	5	Case Let's		1	
		Total		**07**	
V	1.	Training Feedback	"Training & Development Methods" by Dr. Rishipal & Journals	2	
	2.	Evaluation Training Audit		2	
	3.	Training as Continuous Process		2	
	4.	Case Study		1	
		Total		**07**	**36**

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –III (Session 2020-2021)
Subject: MBA/3306/H Performance Management
SUBJECT TEACHER: Prof. P. A. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Overview of HRM Capital and performance appraisal,	Performance Management- A.S. Kohli, T. Deb Human Resource Management – P Subba Rao	2	Total Lectures for Unit I: 7
	2	Evolution of concept of performance management		1	
	3	Concept and perspectives of performance management		2	
	4	Meaning, Nature and scope of Performance Management.		1	
	5	Case Study		1	
II	1	Principles and Models of Performance Management,	Performance Management- A.S. Kohli, T. Deb Performance Management-A M Sharma	2	Total Lectures for Unit II: 7
	2	Imperatives, Antecedents, determinants and elements of performance management		2	
	3	Challenges to performance management		1	
	4	Case Study		2	
III	1	Performance Management System: Concept, Nature, Objectives, Functions	Performance Management- A.S. Kohli, T. Deb Performance Management-A M Sharma	2	Total Lectures for Unit III: 7
	2	Effective performance management system		2	
	3	Competency based performance management System and recent developments		1	
	4	Performance Counseling-Concept, Principles and Skills.		1	
	5	Case Study		1	
IV	1	Performance Management Process: Performance Planning-Definition, Objectives, characteristics and process.	Performance Management- A.S. Kohli, T. Deb Performance Management-A M Sharma	1	Total Lectures for Unit IV: 8
	2	Performance Management Plan		1	
	3	Competency Mapping- Methods and Applications, Linkages to performance planning. Process of performance managing		2	
	4	Performance Appraisal-Meaning, Principles, Process, Effective Design		1	
	5	Performance Monitoring: Definition, Characteristics, Objectives, Process and Practices.		1	
	6	Mentoring-Concepts and Applications & Performance Management Audit.		1	
	7	Case Study		1	
V	1	Performance Management Implementation: Bottlenecks, Strategies, Operationalization.	Performance Management- A.S. Kohli, T. Deb Performance Management-A M Sharma	1	Total Lectures for Unit V: 7
	2	Performance Management Link Reward System- Objectives, components, job performance with job satisfaction		2	
	3	High performance teams. HR, Ethics and Performance Management		1	
	4	Role of HR in Performance Management		1	
	5	Ethics and Performance Management.		1	
	6	Case Study		1	
			Total Lectures Required: 36		

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

PRMIT&R			
Department of Management Studies(MBA)			
Session Plan 2020-2021			
Advertising Management			
Subject Teacher: Prof. Rajkumar K Dhanuka			
Unit No	**Topic**	**Reference Book**	**Estimated Lectures**
Unit No - I	Nature, Type & Functions	Advertising Management By: - Jayashri Jethwaney & Shruti Jain (Oxford university Presss)	1
	Scope and Role of Advertising in Market Place	Advertising Management By: - Jayashri Jethwaney & Shruti Jain (Oxford university Presss)	1
	Economic Aspects of Advertising	Advertising Management By: - Jayashri Jethwaney & Shruti Jain (Oxford university Presss)	1
	Ethical and Social Aspects of Advertising	Advertising Management By: - Jayashri Jethwaney & Shruti Jain (Oxford university Presss)	2
	Case Lets & Case Study	University Question Papers	2
Unit No - II	Marketing Communication	Advertising fourth edition By: -Frank Jefkins (Pearson Publication)	1
	Process of Communication & its flow	Advertising fourth edition By: -Frank Jefkins (Pearson Publication)	1
	Types of Communication Systems	Advertising fourth edition By: -Frank Jefkins (Pearson Publication)	1
	Models Advertising Effect Models	Advertising fourth edition By: -Frank Jefkins (Pearson Publication)	2
	Case Lets & Case Study	University Question Papers	2
Unit No - III	Advertising Planning & Objectives	Advertising fourth edition By: -Frank Jefkins (Pearson Publication)	1
	DAGMAR Approach	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	1
	Building of Advertising Program –	Advertising fourth edition	2

	Message, Headlines, Copy, Logo, Illustration, Appeals, Layout	By: -Frank Jefkins (Pearson Publication)	
	Case Lets & Case Study	University Question Papers	2
Unit No - IV	Media Planning & Strategies	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	1
	Media Buying – Broadcast & Print	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	2
	Advertising Budget -Allocation	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	1
	Advertising Budget – Approaches	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	1
	Advertising Budget –Influencing Factors	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	1
	Case Lets & Case Study	University Question Papers	2
Unit No - V	Advertising Campaign Planning	S A Chunawalla & K C Sethia , *Advertising Theory and Practice,* 7th ed., 2002, Himalaya Publishing House	1
	Advertising Organization – Selection	Advertising Management By: - Jayashri Jethwaney & Shruti Jain (Oxford university Presss)	1
	Compensation & Appraisal of Advertising Agencies	Advertising fourth edition By: -Frank Jefkins (Pearson Publication)	2
	Web Advertising	Advertising fourth edition	1
		By: -Frank Jefkins (Pearson Publication)	
	Case Lets & Case Study	University Question Papers	2
Total Lectures required to Cover Syllabus			35

Department of Management Studies
Semester –III (Session 2020-2021)
Teaching Plan

Subject: Agro Business Management   **Subject Teacher: Prof. G. D. Pachaghare**

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	a) b) c) d) e) 	Agricultural, Allied Products. Agro Processed Products. Agro Processed Products status in Indian Market. Emerging Issues in the business Agriculture Produces. CASE STUDY **TOTAL LECTURES**	*Agricultural Marketing in India – S.S. Acharya and N L Agarwal – Oxford & IBH Publishing Co. Pvt. Ltd. Calcutta. *Agribusiness Management in India – Text & Cases – Dr. Subhash Bhave	01 01 02 02 01 **07**	
II	a) b) c) d) e) 	Agriculture Marketing: Concept. Definition & Scope. Objectives. Upcoming Practices in Agriculture Marketing. CASE STUDY **TOTAL LECTURES**	*Agricultural Marketing in India – S.S. Acharya and N L Agarwal – Oxford & IBH Publishing Co. Pvt. Ltd. Calcutta. *Agribusiness Management in India – Text & Cases – Dr. Subhash Bhave	02 01 01 02 01 **07**	

III	a)	Agribusiness-Emerging Branches.	*Agricultural Marketing in India – S.S. Acharya and N L Agarwal – Oxford & IBH Publishing Co. Pvt. Ltd. Calcutta. *Agribusiness Management in India – Text & Cases – Dr. Subhash Bhave	02	
	b)	Non Conventional Forms of Agribusiness.		02	
	c)	Retailing & Merchandising of Agri Produces.		01	
	d)	Export Potential for farm products-Supporting Services.		02	
	e)	CASE STUDY		01	
		TOTAL LECTURES		**08**	
IV	a)	Role of Agencies for promotion of Exports of Agri Products.	*Agricultural Marketing in India – S.S. Acharya and N L Agarwal – Oxford & IBH Publishing Co. Pvt. Ltd. Calcutta. *Agribusiness Management in India – Text & Cases – Dr. Subhash Bhave	02	
	b)	Role of Agencies for marketing of Agri Products.		02	
	c)	Standards of Agriculture Produces.		02	
	d)	Organized Retailing in Agri Inputs and Outputs.		01	
	e)	CASE STUDY		01	
		TOTAL LECTURES		**08**	

V	a)	Marketing Mix of Agriculture Products.	*Agricultural Marketing in India – S.S. Acharya and N L Agarwal – Oxford & IBH Publishing Co. Pvt. Ltd. Calcutta. *Agribusiness Management in India – Text & Cases – Dr. Subhash Bhave	02	
	b)	Role of Information and Communication Technology in Agriculture Marketing.		02	
	c)	CASE STUDY		01	
		TOTAL LECTURES		**05**	

Note: No of available session are 35 & include at least one case study in each unit

Department of Management Studies
Semester –III (Session 2020-2021)
Subject: Brand Management
SUBJECT TEACHER: Prof. S. B. Diwan

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
1	1	Concept of Brand	Chunawala S.A., Brand Management; U.C. Mathur, Brand Management; Harsh Verma- Brand Management	2	Total Lectures for Unit I:9
	2	Brand Evolution		2	
	3	Brand Hierarchy		2	
	4	Brand Identity, Brand Image		2	
	5	Caselet on Brand Image		1	
2	1	Brand Peronsonality	Chunawala S.A., Brand Management; U.C. Mathur, Brand Management; Harsh Verma- Brand Management	1	Total Lectures for Unit II:8
	2	Brand Positioning & Repositioning		2	
	3	Brand Equity		2	
	4	Types of Branding- Product, Line, Range, Umbrella & Endorsement Branding		2	
	5	Caselet on Brand Portfolio		1	
3	1	Brand Creation	Chunawala S.A., Brand Management; U.C. Mathur, Brand Management; Harsh Verma- Brand Management	2	Total Lectures for Unit III:8
	2	Brand product Relationship		2	
	3	Brand Portfolio		1	
	4	Brand Elimination		1	
	5	Brand Revitalisation		1	
	6	Caselet on Brand Product Relationship		1	
4	1	Managing Brands	Chunawala S.A., Brand Management; U.C. Mathur, Brand Management; Harsh Verma- Brand Management	2	Total Lectures for Unit IV:6
	2	Brand Extensions		2	
	3	Financial Aspects of Brands		1	
	4	Caselet on Brand extension		1	
5	1	Branding in Retailers	Chunawala S.A., Brand Management; U.C. Mathur, Brand Management; Harsh Verma- Brand Management	1	Total Lectures for Unit V:5
	2	Branding in Services		1	
	3	Branding in High-tech Products		1	
	4	Caselet on Branding strategies in Clothing		2	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –III (Session 2020-2021)

Subject: Consumer Behaviour (MBA/3203/M)

SUBJECT TEACHER: Prof. A. V. Deshmukh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Introduction to consumer behaviour	1. Consumer Behaviour Engel, Blackwell, Thompson Publications	1	Total No. of Hours= 07
	2	Acivities/ elements of consumer behaviour		1	
	3	Evolution of consumer behaviour		1	
	4	Marketing strategy & consumer behaviour	2. Consumer Behaviour Schiffman & Kanuk, Pearson Education	1	
	5	Marketing strategy & consumer behaviour		1	
	6	Concept of consumer involvement & decision making		1	
	7	Case Study		1	
II	1	Concept of consumer decision making process	1. Consumer Behaviour Batra	1	Total No. of Hours= 08
	2	Information search & it's evaluation		1	
	3	Decision rules, purchase & post purchase evaluation	2. Consumer Behaviour- Text & Cases, Nair, Suja, Himalaya Publishing	1	
	4	Concept of consumer motivation		1	
	5	Theories of motivation		1	
	6	Concept of consumer perception		1	
	7	Theories of consumer perception		1	
	8	Case Study		1	
III	1	Consumer attitude formation & change	1. Consumer Behaviour- Text & Cases, Nair, Suja, Himalaya Publishing	1	Total No. of Hours= 07
	2	Models of attitude formation		1	
	3	Personality- Meaning, characteristics & factors		1	
	4	Theories of personality		1	
	5	Psychographics- it's impact on buying behavior	2. Consumer Behaviour Schiffman & Kanuk, Pearson Education	1	
	6	Lifestyle- it's influence on buying behavior		1	
	7	Case Study		1	

IV	1	Diffusion of Innovation- factors & process	1 Consumer Behaviour Schiffman & Kanuk, Pearson Education 2. Consumer Behaviour- Text & Cases, Nair, Suja, Himalaya Publishing	1	Total No. of Hours= 06
	2	Opinion Leadership- Characteristics, promotional strategy		1	
	3	Role of family in consumer decision making		1	
	4	Family life cycle stage, strategies adopted by spouses		1	
	5	Reference groups- types & it's influence		1	
	6	Case Study		1	
				1	
V	1	Industrial buying- Meaning & participants	1. Consumer Behaviour- Text & Cases, Nair, Suja, Himalaya Publishing 2. Consumer Behaviour Engel, Blackwell, Thompson Publications	1	Total No. of Hours= 07
	2	Buying decisions & characteristics of industrial buying		1	
	3	Stages in industrial buying process.		1	
	4	Consumer behavior models- Howard Sheth		1	
	5	Nicosia & EBM models of consumer behaviour		1	
	6	Sheth model of industrial buying		1	
	7	Consumer behavior studies in India		1	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to International Markets	International Marketing – Francis Cherunilam Rungman A.M. & Hodgettts R.M., International Business	1	Total Lectures for Unit I: 7
	2	Expansion of International Markets, Motives for International Marketing		1	
	3	International Marketing Decisions		1	
	4	Scope of Marketing ,Indian Products Abroad		1	
	5	Multinational Enterprises ,International Culture & International Trade		2	
	6	Caselet on scope Indian product abroad		1	
II	1	Global Strategy Planning	International Marketing – Francis Cherunilam Rungman A.M. & Hodgettts R.M., International Business	2	Total Lectures for Unit II: 8
	2	Political Risk & Negotiation Strategy		2	
	3	Market Selection		1	
	4	Market Entry Strategies		1	
	5	Market Coverage Strategies		1	
	6	Caselet on Market Entry & Coverage Strategy		1	
III	1	International Product Decisions- Product , Product Mix, Product Life Cycle	International Marketing – Francis Cherunilam Rungman A.M. & Hodgettts R.M., International Business	1	Total Lectures for Unit III: 7
	2	International Product Decisions- New Product Development, Business Environment & Strategies		1	
	3	International Pricing Decisions – Pricing Objectives, Factors affecting Pricing		1	
	4	International Pricing Decisions- Pricing Methods, Information required for Pricing		1	
	5	International Distribution Decisions- International Channel System, Types of Intermediaries		2	
	6	Case-study on Product & Pricing Decisions		1	
IV	1	International Marketing Intelligence- Information requirement, Market Research	International Marketing – Francis Cherunilam Rungman A.M. & Hodgettts R.M., International Business	1	Total Lectures for Unit IV: 7
	2	International Marketing Intelligence- Methods of Data Collection, Problems in International Research		1	
	3	International Promotion- Promotion Strategies, Major Decisions in International Communications		2	
	3	Export Procedures & Documents		2	
	4	Caselet on International Marketing Intelligence		1	
V	1	Quality Control & Pre-Shipment Inspection	International Marketing – Francis Cherunilam Rungman A.M. & Hodgettts R.M., International Business	1	Total Lectures for Unit V: 7
	2	Issues in International Business		1	
	3	Business Ethics, Social Responsibility Of Business		2	
	4	Environmental Issues ,		2	
	5	Labour Issues		1	
			Total Lectures Required	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –III (Session 2020-2021)
Subject: Sales and Distribution Management
SUBJECT TEACHER: Prof. S.R. Deshmukh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction to Sales Management & Sales Organization	"Sales Management" by Pradip Kumar Malik	1	Total Lectures for Unit I: 8
	2	Determining Sales Related Marketing Policies - I		1	
	3	Determining Sales Related Marketing Policies - II		1	
	4	Sales Functions and Policies		1	
	5	International Sales Management		1	
	6	Personal Selling- I		1	
	7	Personal Selling- II		1	
	8	Case Study		1	
II	1	Sales Planning	"Sales Management" by Pradip Kumar Malik and Chunawala S.A.	1	Total Lectures for Unit II: 6
	2	Sales Budgets - Estimating Market Potential		1	
	3	Forecasting Sales		1	
	4	Sales Quotes		1	
	5	Sales and Cost Analysis		1	
	6	Case Study		1	
III	1	Sales Force Management; Hiring and Training Sales Personnel	"Sales Management" by Pradip Kumar Malik and Chunawala S.A.	1	Total Lectures for Unit III: 8
	2	Time and Territory Management		1	
	3	Compensating Sales Personnel		1	
	4	Motivating Sales Force - I		1	
	5	Motivating Sales Force - II		1	
	6	Leading the Sales Force		1	
	7	Evaluating Sales Force Performance		1	
	8	Case Study		1	
IV	1	Marketing Logistics; Distribution as Marketing Mix Element	"Distribution Management" by Tapan K Panda	1	Total Lectures for Unit IV: 7
	2	Distribution Resource Planning		1	
	3	Marketing Channel Integration		1	
	4	Channel Management; Nature of Marketing Channels		1	
	5	Evaluating Channel Performance		1	
	6	Tele Marketing and Web Marketing		1	

	7	Case Study		1	
V	1	Managing Channel Conflicts	"Distribution Management" by Tapan K Panda	1	Total Lectures for Unit V: 6
	2	Channel Information Systems - I		1	
	3	Channel Information Systems - II		1	
	4	Wholesaling and Retailing		1	
	5	Ethical and Social Issues in SDM		1	
	6	Case Study		1	
			Total Lectures Required: 35		

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Odd-Semester – III (Session 2020-21)-Teaching Plan

Subject Teacher: Prof.Gauri S.Kalmegh   **Subject: FD (4103)**

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	**1**	Introduction to syllabus & Importance of subject	**"Financial Derivatives" by S.Chand**	1	
	2	Financial Derivatives- Introduction, Participants, its products, Feature.		2	
	3	History of Derivative Market		1	
	4	Myth about derivative market & its regulation in India		2	
		Total		**06**	
II	1.	Forward Contract-Concept, & meaning	**"Financial Derivatives" by S.Chand**	1	
	2.	Mechanism of Forward contract		2	
	3.	Concept of pricing of forwards		2	
	4.	Hedging in forward Contracts		2	
		Total		**07**	
III	1.	Future Contract-Introduction, Concept	**"Futures & Options" by Gardener**	1	
	2.	Mechanism of Future Contract		2	
	3.	Types of Future-Pricing & Hedging		2	
	4.	Types o Future- Stock Index future		2	
		Total		**07**	
IV	1.	Options-Concept & Meaning Types of options	**"Futures & Options" by Gardener**	2	
	2.	Pricing of Options		2	
	3.	Black & Scholes Binomial Model		1	
	4.	Trading strategies involving options		2	
		Total		**07**	
V	1.	Swaps-Concept & meaning	**"Financial Derivatives" by S.Chand**	1	
	2.	Mechanism of Interest rate swaps		2	
	3.	Mechanism of currency swaps		2	
	4.	Valuation of interest rate swaps		2	
	5.	Valuation of currency swaps		2	
		Total		**09**	**36**

Prof. Ram Meghe Institute of Technology & Research, Badnera

Department of Management Studies

Semester – IV (A.Y. 2020-2021)

Teaching Plan

Subject: Financial Decision Analysis (FDA) Prof. N. M. Gawande

Subject Code: - MBA/4101/CGF

Day	Topic No.	Topic	Text & Refernces	Unit
1	1.2	Introduction To Financial Decsion Analysis	Fundamentals of Investments, by William F, Alexander, Gordon, J. and Sharpe, Englewood Cliffs,New Jersey.,Prentice Hall Inc.,3rd ed., 2003	1
2		Ratio Analysis		1
3		Ratio Analysis -2		1
4	1.3	Fund Flow Analysis		1
5		Fund Flow Analysis -2		1
6		Fund Flow Analysis -3		1
7	1.4	Cash Flow Analysis		1
8		Cash Flow Analysis -2		1
9		Revision - Unit 01		2
10	2.1	Capital Expenditure	Financial Management by Prasanna Chandra,McGraw Hill Education, Ninth edition	2
11	2.2	Capital Expenditure - Risk Decisions		2
12		Capital Expenditure - Risk Decisions		2
13	2.3 & 2.4	Cvp Analysis		2
14		Cvp Analysis		2
15		Cvp Analysis		2
16		Revision Unit-2		2
17	3.2	Leasing Vs. Buying	Financial Management and Policy by Van Horne James & Dr. Sanjay Dhamija, Pearson Education India; 12 edition (2011)	3
18		Leasing Vs. Buying		3
19	3.3	Replacement Decisions		3
20		Replacement Decisions		3
21	3.5	Sequencing Decisions		3
22		Sequencing Decisions		3
23		Revision Unit - 3		3
24	4.1	Business Failure And Reorganisation	Practical Cost Accounting written by Khanna B.S. published	4
25	4.2	Merger / Acquisitions		4

26		**Merger / Acquisitions**		4
27		**Merger / Acquisitions**		4
28	**4.4**	**Capital Structure Decisions**	**by S.Chand & Co**	4
29		**Capital Structure Decisions**		4
30		Revision Unit-4		4
31	**5.1, 5.2**	**Dividend Decision Models**	**Khan and Jain, Financial Management, Tata Mcgrawhill, 5th ed**	5
32		**Dividend Decision Models**		5
33		**Dividend Decision Models**		5
34	**5.3 & 5.4**	**Present Value Models**		5
35		**Present Value Models**		5
36		Revision Unit - 5		5

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Management Studies

Lesson Plan
Subject: Foreign Exchange Markets
Semester –IV (Session 2020-2021)
Subject Teacher: Prof. G.D. Pachaghare

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	The rise and fall of Bretton Woods	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol, 2001. P.G.Apte, "International Financial Management", Tata McGraw Hill	2	Total Lectures for Unit I: 7
	2	Present International Financial Systems		1	
	3	International Monetary System		2	
	4	Working of IMF		1	
	5	Case study		1	
II	1	Foreign Exchange Markets: Organization, Structure and types	P.G.Apte, "International Financial Management", Tata McGraw Hill Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol, 2001.	1	Total Lectures for Unit II: 8
	2	Exchange rate determination and equilibrium		2	
	3	Factors affecting exchange rate determination		2	
	4	Direct and Indirect Quotes		1	
	5	Spot and Forward Rate		1	
	6	Case Study		1	
III	1	Exposure management: Organization, function, parameter	Bhalla, V.K., International Financial Management, 2nd ed., New Delhi, Anmol, 2001.	2	Total Lectures for Unit III: 8
	2	Exposure management: constraints and techniques		1	
	3	Exposure Information System		1	
	4	Corporate Exposure Management		2	
	5	Case Study		2	
IV	1	Currency futures and options	Maheshwari, S. N., International Financial Management	1	Total Lectures for Unit IV: 6
	2	Interest rate swaps		2	
	3	Currency Swaps working and valuation		2	
	4	Case Study		1	
V	1	Euro-currency market	Bhalla, V. K., Managing International Investment and Finance, New Delhi, Anmol, 1997	1	Total Lectures for Unit V: 7
	2	Euro banking and Euro-currency centers		2	
	3	Eurobond and its valuation		1	
	4	International Bond market- Introduction and features		2	
	5	Case Study		1	
			Total Lectures Required	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Introduction to Insurance, Concept and Definition, Nature of Insurable Risk	Insurance &Risk Management : P.K.Gupta, Insurance Management :S.C.Sahu & S.C.Das, Principle and Practics Insurance: Dr.P.Periasamy	2	Total Lectures for Unit I: 7
	2	Importance and Classification of Insurance		2	
	3	Essentials and Principles of an Insurance Contract		2	
	4	Insurance Contract v/s. Wagering Contract		1	
II	1	Introduction to Life Insurance, Concept, Definition	Insurance &Risk Management : P.K.Gupta, Insurance Management :S.C.Sahu & S.C.Das, Principle and Practics Insurance: Dr.P.Periasamy	2	Total Lectures for Unit II: 7
	2	Essential Features and Principles of Life Insurance, Characteristics		2	
	3	Need and Importance of Mortality Table, Construction of Mortality Tables		2	
	4	Types of Mortality Table, Computation of Premium.		1	
III	1	Life Insurance Products, Term Assurance Plan, Endowment Policies	Insurance &Risk Management : P.K.Gupta, Insurance Management :S.C.Sahu & S.C.Das, Principle and Practics Insurance: Dr.P.Periasamy	2	Total Lectures for Unit III:8
	2	Whole Life Policies. Definition and Nature of Annuity		1	
	3	Life Insurance V/s Annuity, Types of AnnuityProducts		1	
	4	ULIP and Pension Plans, Meaning and Types, Selecting a Pension Plan		1	
	5	Comparison of different Insurance Plan		1	
	6	Life Insurance Corporation of India-Functions, Organization and Management		1	
	7	Case Let		1	
IV	1	Introduction to General Insurance ,Concept and Types	Insurance &Risk Management : P.K.Gupta, Insurance Management :S.C.Sahu & S.C.Das, Principle and Practics Insurance: Dr.P.Periasamy	1	Total Lectures for Unit IV: 8
	2	Fire Insurance , Concept, Definition, Nature and Functions		1	
	3	Procedure of taking out, Renewal, Cancellation and Assignment of Fire Insurance Policy		2	
	4	Principles of Fire Insurance-Utmost Good Faith,		1	
	5	Insurable Interest, Indemnity, Subrogation, Causa Proxima		2	
	6	Case Let		1	
V	1	Health Insurance, Automobile Insurance,	Insurance &Risk Management : P.K.Gupta, Insurance Management :S.C.Sahu & S.C.Das,	1	Total Lectures for Unit V: 6
	2	Agriculture Insurance, Property Insurance		2	
	3	Property Insurance ,Concept, Features, Functioning and Prospects		2	
	4	Case Let		1	
			Total Lectures Required:	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies
Semester –IV (Session 2020-2021)
Teaching Plan
Subject: Management and Financial Services
Subject Teacher: Prof. G.S. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	01	Financial Services : Meaning , Importance and role	Gordan, E. and K. Natrajan, *Emerging Scenario of Financial Services*, Himalaya Publishing House, 1997	01	
	02	Indian Financial Market : Primary & Secondary	Avadhani, V.A., *Investment Analysis Portfolio Management*, 2nd ed., 1999.	01	
	03	Nature and Scope of Financial Services	Gordan, E. and K. Natrajan, *Emerging Scenario of Financial Services*, Himalaya Publishing House, 1997	01	
	04	Regulatory Framework of Financial Services		01	
	05	Financial System and Market		01	
	06	Case Study / Application Base		01	
		Total Lecture for Unit No 1st		**06**	
II	01	Risk and Return	Kevin, *Portfolio Management*.	01	
	02	Risk management		01	
	03	Stock Exchange in India	Bhalla, V.K., *Investment Management : Security Analysis and Portfolio Management*, 8th ed., Delhi, S.Chand, 2001	01	
	04	Stock Exchange operation		01	
	05	Managing of Issue of Share and Bonds		01	
	06	Fixed Deposit and Inter-Corporate Loans	Gordan, E. and K. Natrajan, *Emerging Scenario of Financial Services*, Himalaya Publishing House, 1997	01	
	07	Case Study		01	
		Total Lecture for Unit No 2nd		**07**	
III	**01**	Leasing	Gordan, E. and K. Natrajan, *Emerging Scenario of Financial Services*, Himalaya Publishing House, 1997	02	This Unit is based on Numerical
	02	Hire Purchase		02	
	03	Debt Securitization		02	
	04	Housing Finance		02	
		Total Lecture for Unit No 3rd		**08**	
IV	01	Credit Rating & Credit Rating Agencies	Bhalla, V.K., *Investment Management : Security analysis and Portfolio Management*, New	01	
	02	Credit Card and their Types		01	

			Delhi, S.Chand, 2001		
	03	Mutual Fund	Gordan, E. and K. Natrajan, *Emerging Scenario of Financial Services*, Himalaya Publishing House, 1997	01	
	04	Advance banking	Vasant Desai, Development Banking and Financial Intermediaries, Economy, Himalaya Publishing House Pvt. Ltd. India 2008	01	
	05	Insurance and their types	O.P. Agrawal, Banking and Insurance, Economy, Himalaya Publishing House Pvt. Ltd. India 2010	01	
	06	Merchant Banking services		01	
	07	Case study		01	
		Total Lecture for Unit No 4th		**07**	
V	01	Venture Capital`	Khan and Jain, Financial Management, Tata Mcgrawhill, 5th ed.	02	
		Factors for failing		01	
	02	Bill Discounting		01	
	03	Case Study		01	
		Total Lecture for Unit No 5th		**05**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Security Analysis- Defination, Objectives	Bhalla,V.K.,Investment Management:Secutity Anaysis and Portfolio Management.& Avadhani, V.A., Investment Analysis Portfolio Manageme	1	Total Lectures for Unit I: 7
	2	Operations of Indian Stock Market		1	
	3	Types & Its Recent Developments		1	
	4	Listing & Indexing of Securities Rules & Regulations		2	
	5	SEBI- Roles, Functions		1	
	6	Case Study		1	
II	1	Fundamental Analysis	Bhalla,V.K.,Investment Management:Secutity Anaysis and Portfolio Management.& Avadhani, V.A., Investment Analysis Portfolio Manageme	1	Total Lectures for Unit II: 7
	2	Economy-Industry & Company (EIC Analysis)		2	
	3	Technical Analysis		2	
	4	Tools & Techniques		1	
	5	Case Study		1	
III	1	Portfolio Management Concept & Meaning	Bhalla,V.K.,Investment Management:Secutity Anaysis and Portfolio Management.& Avadhani, V.A., Investment Analysis Portfolio Manageme .	1	Total Lectures for Unit III:8
	2	Risk-Return Tradeoff		1	
	3	The Mean -Variance Criterion (MVC)		1	
	4	Markowitz Portfolio Theory		1	
	5	MVC & Portfolio Selection		1	
	6	Portfolio of Two Risky Securities		1	
	7	A Three Security Portfolio		1	
	8	Case Study		1	
IV	1	The Efficient Frontier- Tracing & Constructing	Bhalla,V.K.,Investment Management:Secutity Anaysis and Portfolio Management.& Avadhani, V.A., Investment Analysis Portfolio Manageme .	1	Total Lectures for Unit IV: 7
	2	Sharpe: Single Index Model		1	
	3	Capital Asset Pricing Model		1	
	4	Characterisitics Lines		1	
	5	Factor Models and Arbitrage Pricing Theory.		2	
	6	Case Study		1	
V	1	Portfolio Investment Process	Bhalla,V.K.,Investment Management:Secutity Anaysis and Portfolio Management.& Avadhani, V.A., Investment Analysis Portfolio Manageme	1	Total Lectures for Unit V: 7
	2	Bond Portfolio Management Strategies		1	
	3	Investment Timing		1	
	4	Portfolio Performance Evaluation		2	
	5	Revision Models		1	
	6	Case Study		1	
			Total Lectures Required:		**36**

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

	Department of Management Studies				
	Semester –IV (Session 2020-2021)				
	Subject: Strategic Management (MBA/401)				
	SUBJECT TEACHER: Prof. A. V. Deshmukh				
Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Concept of strategy	Business Policy and Strategic Management – Acharya and Govekar	1	Total =08
	2	Evolution of Corporate Policy in India		1	
	3	Strategic Management		1	
	4	Strategic management Process		1	
	5	Models and Phases of Strategic Management Process-I		1	
	6	Models and Phases of Strategic Management Process-II		1	
	7	7-S Framework		1	
	8	Case study		1	
II	1	SWOT Analysis	*Strategic Management- Francis Cherunilam*	1	Total =07
	2	Environmental Analysis-I		1	
	3	Environmental Analysis-II		1	
	4	Competitive Analysis		1	
	5	In Internal corporate Analysis-I		1	
	6	Internal corporate Analysis-II		1	
	7	Case Study		1	
III	1	Strategic Analysis	*Strategic Management-John Pearce-* TMH	1	Total =07
	2	Cost Analysis		1	
	3	Portfolio Analysis		1	
	4	Display Matrices		1	
	5	Operating and Financial Analysis-I		1	
	6	Operating and Financial Analysis-II		1	
	7	Case Study		1	
IV	1	Strategic Alternatives	Corporate Strategy and Business Policy - Azhar Kazmi, TMH Publications	1	Total =07
	2	Diversification		1	
	3	Mergers and Acquisition-I		1	
	4	Mergers and Acquisition-II		1	
	5	Turn-Around Management		1	
	6	Turn-Around Management		1	
	7	Case Study		1	
V	1	Strategic Choice	*Strategic Management-John Pearce-* TMH	1	Total =07
	2	Implementation of Strategy-I		1	
	3	Implementation of Strategy-II		1	
	4	Evaluation of Strategy		1	
	5	Control Of Strategy-I		1	
	6	Control Of Strategy-II		1	
	7	Case Study		1	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –IV (Session 2020-2021)

Subject: CLM

SUBJECT TEACHER: PROF. S. A. Pachkhede

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Leadership – Meaning, Concepts and Myths,	Principles of Management 10th ed- Koontz, H and Wechrich,H	2	**Total=07**
	2	Components of Leadership- Leader, Followers and situation		2	
	3	Assessing Leadership & Measuring Its effects,.		2	
	4	Case Study		1	
II	1	Focus on the Leader – Power and Influence	Leadership & Management Development	1	**Total=08**
	2	Leadership and Values		1	
	3	Leadership Behaviour		2	
	4	Attributes of Leaders and Managers		2	
	5	Leadership and Management		1	
	6	Case Study		1	
III	1	Contingency Theories of Leadership	Leadership & Management Development	2	**Total=07**
	2	Styles of Leadership		2	
	3	Leadership Dimensions		1	
	4	Leadership Development		1	
	5	Case Study		1	
IV	1	Leadership Skills – Basic Leadership Skills	Human Resource Management -VSP Rao	1	**Total=06**
	2	Building Technical Competency		2	
	3	Advanced Leadership Skills		2	
	4	Case Study		1	
V	1	Groups, Teams and Their Leadership	West Michael - Effective Team Work Leadership & Management Development	1	**Total=08**
	2	Leadership and Change		2	
	3	Leadership Model		2	
	4	Brief Biographies of some great western and Indian Business Leaders-Henry Ford-II, Victor Trumph, Bill Gates		1	
	5	J.R.D. Tata, Dhirubhai Ambani, Ratan Tata		1	
	6	Case Study		1	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

MBA Teaching Plan 2020-21 Winter Session (Even SEM) Sem-IV Subject : HBWP (MBA/4301/OB)

SUBJECT TEACHER- PROF. Y. R. VAIDYA

Unit No.	Topic No	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
1	1	OB: Definition, Objectives, Key Elements and nature.Organizational Behaviour Process,models	Management & Organistional Behaviour- Dr JS Reddy Himalaya Publications & Orgational Behaviour - K Ashwatthapa Himalaya Publications	2	
	2	Organizational Behaviour systems and its elements.Overview of evolution of Organizational Behaviour.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	3	Contributing disciplines to Organizational Behaviour.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	4	Individual and Individual Difference,	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	5	Human Behaviour and its causation, models of man,	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	6	whole person approach including physical, psychological, mental, emotional and spiritual level.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	7	Case Study	A Tale of Twist & Turn A Case Study	1	
2	1	Intellignece, Emotions and moods,Abilities,competencies and skills	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	2	Personality, perception, attitudes,Values, motivation and learning.	Management & Organistional Behaviour- Dr JS Reddy Himalaya Publications	1	
	3	Personality: concepts, Theories and determinants,applications in Organizational Behaviour.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	

	4	Perception:Defination, Difference between perception and sensation, factors affecting perception, improving perceptions and applications in Organizational Behaviour.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	5	Attitudes and Values: Attitudes- concepts, formation, types, measurement and attitude change. Overview of values and its application in Organizational Behaviour	Orgational Behaviour - K Ashwatthapa Himalaya Publications	2	
	6	Case Study	Prijudices in Workplace Real or Perceived? Case Study	1	
3	1	Job Satisfaction, Organizational commitment and loyalty:Overview, Concept and Applications in Organizational Behaviour	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	2	Emotions and moods-types, sources and theories with applications in Organizational Behaviour	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	3	Emotional Intelligence, Transactional Analysis	Organiztional Behaviour- Margie Parikh Ranjen Gupta Mc Graw Hill Publications	1	
	4	Overview of Motivation and Morale in Organizational Behaviour,	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	5	Overview of Group Dynamics- Meaning, Types of Groups & Group Processes.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	6	Case Study	Groups Make a Difference at Brazil's Semco	1	
4	1	Learning- Meaning, Definition, Principles and concept of reinforcement,punishment.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	

	2	Learning Behaviour-Concept, Models and its applications. sources, types, aspects of conflicts	Management & Organistional Behaviour- Dr JS Reddy Himalaya Publications	1	
	3	Conflict and Conflict Resolution-Definition,	Management & Organistional Behaviour- Dr JS Reddy Himalaya Publications	1	
	4	Conflict resolution and management,	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	5	Negotiation strategies, Counseling, Participative management.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	2	
	6	Case Study	When CEO of a Family Firm Gets into a Role Conflict	1	
5	1	Organizational culture and climate-Organizational culture its definition, types, functions, managing culture.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	2	
	2	Creating Sustaining and changing culture.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	3	Organizational Climate-Concept, Dimensions, Determinants and comparison with organizational culture	Orgational Behaviour - K Ashwatthapa Himalaya Publications	2	
	4	Quality of Work life- Concept, Meaning and Applications.	Orgational Behaviour - K Ashwatthapa Himalaya Publications	1	
	5	Case Study	P & G - The Epitome of Organizational Culture	2	

MBA Teaching Plan 2020-21 Winter Session (Even SEM) SEM-IV Subject : IHRM (MBA/4306/OB

SUBJECT TEACHER-PROF. Y. R. VAIDYA

Unit No.	Topic No	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
1	1	International HRM: Concept and Issues	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	2	Barriers in Global HRM	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	3	Culture, Society and Nations	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	4	Cultural Change and Universals	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	5	Cultural Sensitivity and Global Business	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	6	Cross Cultural Theories.	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	7	Case Study	IHRM Challenges- A Case Study	1	
2	1	International Business	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	2	Employee Behaviour and Cross Culture	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	3	Cross Cultural Negotiations	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	4	Organizational Culture.	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	5	Case Study	Cultural Clash- A Case Study	1	
3	1	Culture and Organisational Performance	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	

	2	International Business and International HRM Approaches	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	3	Organizing Multinational Structures	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	4	Case Study	NIIT Case Study	1	
4	1	International HRM Functions: Recruitment and Selection	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	2	Training and Development	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	3	Compensation,	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	4	Employee Performance	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	1	
	5	Case Study	JAMBA Juice- Case Study	1	
5	1	International Projects and HR	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	2	Organizational Ethics	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	3	Ethics across culture	International HRM Text & Cases -S.C. Gupta, MacMillan Publication	2	
	4	Case Study	Coca Cola Case Study	2	

Department of Management Studies
Semester –IV (Session 2020-2021)
Subject: Knowledge Management
SUBJECT TEACHER: Prof. P. A. Kalmegh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Knowledge and Knowledge Management: Concept and Meaning	Donald Hislop, Knowledge Management in Organization, Oxford University Press Knowledge Human Resource Management-Ganesh Shermon	1	Total Lectures for Unit I: 8
	2	Contemporary Significance, Aims, Philosophy and Structure		1	
	3	Knowledge Society Concept, post industrial concept		1	
	4	Types of Knowledge, Conduit model of knowledge sharing		1	
	5	Knowledge management processes.		1	
	6	Knowledge-features, perspectives of knowledge		1	
	7	Organizational knowledge base		1	
	8	Case Study		1	
II	1	Managing knowledge, knowledge management and business strategy	Knowledge Management in theory & practice-Kimiz Dalkir & Donald Hislop, Knowledge Management in Organization	1	Total Lectures for Unit II: 7
	2	Knowledge management strategies-Hansen Codification versus personalization framework		1	
	3	Earl's Seven School of knowledge management		1	
	4	Alvesson and Karreman's four knowledge management approaches.		1	
	5	Knowledge worker, knowledge intensive firms, knowledge work and ambiguity		1	
	6	Workers participation in knowledge processes.		1	
	7	Case Study		1	
III	1	Learning and Knowledge Management: The Heterogeneity of learning,	Knowledge Management in theory & practice-Kimiz Dalkir & Donald Hislop, Knowledge Management in Organization	1	Total Lectures for Unit III: 8
	2	Dynamics of organizational learning, The learning organisation		1	
	3	Knowledge creations and loss-Innovation		1	
	4	Dynamics and knowledge processes		1	
	5	Knowledge creation theory, social dynamics of innovation networking processes.		1	
	6	Forgetting and Unlearning Knowledge-Typology of forgetting		1	
	7	Barriers and facilitation of unlearning.		1	
	8	Case Study		1	
IV	1	Managing and sharing knowledge: Socio Cultural Issues, Interpersonal Trust, Group Identity, Personality.	Knowledge Management in theory & practice-Kimiz Dalkir & Donald Hislop, Knowledge Management in Organization	1	Total Lectures for Unit IV: 7
	2	Communities of practice-basic characteristics, origins, features, dynamics, knowledge base, intra community		2	
	3	knowledge processes and managing communities of practices		1	
	4	Cross Community, boundary spanning and knowledge process-significance, identity, knowledge, trust and social relations, relationship management.		2	
	5	Case Study		1	
V	1	Power, politics, conflict and knowledge processes.	Knowledge Management in theory & practice-Kimiz Dalkir & Donald Hislop, Knowledge Management in Organization	1	Total Lectures for Unit V: 6
	2	Information, Communication Technology and Knowledge Management		1	
	3	Knowledge management-culture management and HRM practices		1	
	4	Leadership and knowledge management		1	
	5	Knowledge management as a fashion		1	
	6	Case Study		1	
		Total Lectures Required		**36**	

Department of Management Studies Semester –IV (Session 2020-2021)

Teaching Plan

Subject: Management Of Group Process

Subject Teacher : Prof. S. R. Deshmukh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Nature &Characteristics of Group, Types of Group, Theories	P.Subba Rao,K.Aswatathapa .	2	
	2	Group formation, Stages of Group, Development,		2	
	3	Usefulness & Pitfalls of Group, Size and Name of Group,		1	
	4	Group Decision Making & problem solving Processes		1	
	5	Models of Decision Making		1	
	6	Case Study		1	
		Total Lectures		**8**	
II	1	Group as a medium of learning, Determinants of Group	K.Aswatathapa	2	
	2	Behavior, Group for Development and Change		2	
	3	Conflicts and Negotiation in groups		2	
	4	Case Lets		1	
		Total Lectures		**7**	
III	1	Group Dynamics, Group Cohesiveness	P.Subba Rao,K.Aswatathapa .	2	
	2	Inter Group Processes		1	
	3	Group Change Influence Process		2	
	4	Case Study		1	
		Total Lectures		**6**	
IV	1	Interpersonal Relationship &Interpersonal Communication	K.Aswatathapa	2	
	2	Interpersonal Awareness,		1	
	3	Group Communication		1	
	4	Its process, Feedback Process.		2	
	5	Case Lets		1	
		Total Lectures		**7**	
V	1	Group Effects: Group Synergy,	P.Subba Rao,K.Aswatathapa	2	
	2	Inter Group Relationship,		1	
	3	Team Building, Group Leadership, Power and Politics in Group		2	
	4	Stress and Frustration and its management in organization.		2	
	5	Case Study		**1**	
		Total Lectures		**8**	

36

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies

Semester –III (Session 2020-2021)

Subject: Organizational Development and intervention strategies

Subject Teacher: Miss. M. M. Nistane

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	01	Introduction	• Theory of OD & Change by Cummings & Worley • OD & Transformation By French, Bell& Zawacki • HRM by P. Subba Rao • HRD by Werner Destmone	01	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	Develop insight into emerging trends and scope of the subject		01	
	03	Meaning, Concept and myth		01	
	04	Theory of OD		01	
	05	Approaches to problem Diagnosis		01	
	06	Case study		01	
Total Lecture				**06**	
II	01	Techniques- steps in OD	• Theory of OD & Change by Cummings & Worley • OD & Transformation By French, Bell& Zawacki • HRM by P. Subba Rao • HRD by Werner Destmone	02	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	General OD competencies		01	
	03	OD skills		01	
	04	Technical training		01	
	05	Case Study		01	
Total Lecture				**06**	
III	01	OD Evaluation	• Theory of OD & Change by Cummings & Worley • OD & Transformation By French, Bell& Zawacki • HRM by P. Subba Rao • HRD by Werner Destmone	02	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	OD Ethics of professional		01	
	03	Future of OD		01	
	04	Introduction to Organizational Effectiveness		01	
	05	Concept and objectives		01	
	06	Nature and need of OEC		01	
	07	Case study		01	
Total Lecture				**08**	
IV	01	Organizational change	• Theory of OD & Change by Cummings & Worley • OD & Transformation By French, Bell& Zawacki	01	Many other books & internet will be referred for Diagrams, Data ,Case studies &
	02	Concept and objectives		01	
	03	Nature and types		01	
	04	Models and implementation		02	
	05	Change strategies		02	

	06	Change agent	• HRM by P. Subba Rao • HRD by Werner Destmone		Details
	06	Case Study		01	
Total Lecture				**08**	
V	01	Organizational Intervention	• Theory of OD & Change by Cummings & Worley • OD & Transformation By French, Bell& Zawacki • HRM by P. Subba Rao • HRD by Werner Destmone	01	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	Organizational Intervention- Major techniques		01	
	03	Designing intervention		01	
	04	Interpersonal Interventions		01	
	05	Team Interventions		01	
	06	Inter- group Interventions		01	
	07	Development interventions Some important final issues concerning OD		01	
	08	Case Study		01	
Total Lecture				**08**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Department of Management Studies
Semester –IV (Session 2020-2021)
Subject: International Marketing Environment
SUBJECT TEACHER: Prof. S. B. Diwan

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Introduction- Distinction between International Marketing and Domestic Marketing	International Marketing : Rakesh Joshi, Oxford International Marketing Mgt: U.C.Mathur, SAGE	1	Total Lectures for Unit I: 8
	2	International Institutions – UNCTAD, WTO		2	
	3	Economic Environment of International Marketing		1	
	4	Trade Agreement – Free Trade Area, Customs Union, Common Market		2	
	5	Evolution of International Business Theories		1	
	6	Case Study		1	
II	1	Overview of India & World Trade – EXIM Policy	International Marketing : Rakesh Joshi, Oxford International Marketing Mgt: U.C.Mathur, SAGE	2	Total Lectures for Unit II: 8
	2	Foreign Trade Policy and Regulation		1	
	3	Trading Partners- Bilateral & Multilateral Trade Agreement		2	
	4	International Market Place & Space, Barriers, International Politics & Economic Integration , Trade Blocks		2	
	5	Case Study		1	
III	1	Institutional Infrastructure for Export Promotion – Export Promotion Councils (EPC)	International Marketing : Rakesh Joshi, Oxford International Marketing Mgt: U.C.Mathur, SAGE	2	Total Lectures for Unit III: 7
	2	Public Sector Trading Agencies – ECGC		1	
	3	Commodity Board		1	
	4	Export – Import Management – Registration of Exporters, Procedure & Documents		1	
	5	Export Quotations		1	
	6	Case Study		1	
IV	1	Shipping and Transportation.	International Marketing : Rakesh Joshi, Oxford International Marketing Mgt: U.C.Mathur, SAGE	1	Total Lectures for Unit IV: 8
	2	Insurance, Negotiations of Documents		2	
	3	Instruments of Payments – Open Account, Bills of Exchange		2	
	4	Instruments of Payments – Letter of Credit, Expert Finance		2	
	5	Case Study		1	
V	1	Trade and BOP of India	International Marketing : Rakesh Joshi, Oxford International Marketing Mgt: U.C.Mathur, SAGE	2	Total Lectures for Unit V: 5
	2	Technological Developments and International Marketing		2	
	3	Case Study		1	
			Total Lectures Required	**36**	

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	01	Introduction	• Marketing Non Profit Organizations by S.M. Jha • Kotler, Philip and Roberto Eduardo L., Social Marketing	01	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	Scope of Marketing in the context of NPO: Hospitals, Police, Public Services, etc.		01	
	03	Scope of Marketing in the context of NPO: Hospitals, Police, Public Services, etc		01	
	04	Scope of Marketing in the context of social services, e.g. health and family welfare, adult literacy Programme.		01	
	05	Application of Marketing in the context of social services, e.g. health and family welfare, adult literacy Programme		01	
	06	Case study		01	
Total Lecture				**06**	
II	01	Setting Marketing Objective	• Marketing Non Profit Organizations by S.M. Jha • Kotler, Philip and Roberto Eduardo L., • Social Marketing	01	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	Analyzing internal & external Environment influencing NPO's		02	
	03	Analyzing internal & external Environment influencing Social Services		02	
	04	Case Study		01	
Total Lecture				**06**	
III	01	Market Segmentation	• Marketing Non	02	Many other

	02	Customer Targeting	Profit Organizations by S.M. Jha • Kotler, Philip and Roberto Eduardo L., Social Marketing	01	books & internet will be referred for Diagrams, Data ,Case studies & Details
	03	Marketing Mix Strategies		02	
	04	Product-Service life cycle for NPO's		01	
	05	Product-Service life cycle for social services		01	
	06	Case study		01	
Total Lecture				**08**	
IV	01	Beneficiary Contact Programme	• Marketing Non Profit Organizations by S.M. Jha • Kotler, Philip and Roberto Eduardo L., Social Marketing	01	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	Use of print and electronic media in mass communication		01	
	03	Diffusion of innovative ideas		01	
	04	Marketing Tools		02	
	05	Distribution & Delivery Strategy for NPOs and Social Services		02	
	06	Case Study		01	
Total Lecture				**08**	
V	01	Marketing Strategies for social services	• Marketing Non Profit Organizations by S.M. Jha • Kotler, Philip and Roberto Eduardo L., Social Marketing	02	Many other books & internet will be referred for Diagrams, Data ,Case studies & Details
	02	Marketing Strategies for NPOs		02	
	03	Relevance of CST (Corporate Social Responsibility)		01	
	04	Review and monitoring of marketing strategies of socially relevant programmes.		02	
	05	Case Study		01	
Total Lecture				**08**	

Department of Management Studies

Semester –IV (Session 2020-2021)
Subject: Marketing Of Services (MBA/4202/SM)
SUBJECT TEACHER: Prof. R.K. Dhanuka

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark if Any
I	1	Understanding Services	Services Marketing – Concepts, application and cases- Shajahan S.	1	**Total=07**
	2	The nature of services marketing		2	
	3	Classification of Services		1	
	4	Classification of Services		1	
	5	Importance of Service Marketing		1	
	6	Case Study		1	
II	1	Services Experience, Consumer Behavior in Services	Services Marketing Text & Readings, Indian Perspective – Ravi Shankar	2	**Total=08**
	2	Customer Expectations and Perceptions,		1	
	3	Listening to Customers		1	
	4	Monitoring and Measuring Customer Satisfaction		1	
	5	Monitoring and Measuring Customer Satisfaction		1	
	6	Complaints Handling		1	
	7	Case Study		1	
III	1	Strategic Issues in Service Marketing	Services Marketing Text & Cases – Rajendra Nargandkar	2	**Total=07**
	2	Market Segmentation and Targeting		1	
	3	Positioning and Differentiation of Services		1	
	4	Managing Demand and Capacity		1	
	5	Managing Demand and Capacity		1	
	6	Case Study		1	
IV	1	The Marketing Mix Elements	Services Marketing Text & Readings,	2	**Total=07**
	2	Maximizing Services Marketing Potential Relationship marketing		1	

	3	Maximizing Services Marketing Potential Relationship marketing	Indian Perspective – Ravi Shankar	1	
	4	Internal Marketing		1	
	5	Supplementary Services		1	
	6	Case Study & Practices		1	
V	1	Tourism and Travel Services Marketing	Services Marketing – Concepts, application and cases- Shajahan S.	1	Total=07
	2	Marketing of Financial Services		1	
	3	Communication Services		1	
	4	Information Services		1	
	5	Media Services Marketing-Advertising (Professional Services)		1	
	6	Media Service Marketing –Brand (Professional Services)		1	
	7	Case Study		1	
				Total Session	36

Department of Management Studies

Semester –IV (Session 2020-2021)

Subject: Retail Marketing

SUBJECT TEACHER: Prof. S.R.Deshmukh

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	0.1	Retailing, An Introduction	Retailing Management – Swapna Pradhan	1	Total Lectures for Unit I: 7
	0.2	Retailing, Indian Vs Global Scenario		2	
	0.3	Types of Retailing		1	
	0.4	Types of Retail formats		2	
	0.5	Franchising in retailing		1	
II	1	Retail Marketing Mix	Channel Management & Retail Management – Meenal Dhotre	2	Total Lectures for Unit II: 8
	1.1	Consumer buying behavior in Retailing		2	
	1.2	Segmentation & Positioning in Retail		1	
	1.3	Structure of Retail Organization		1	
	1.4	Careers in retailing		1	
	1.5	Case Study		1	
III	2	Factors affecting retail location decision	Retail Management – Gibson Vedamani	2	Total Lectures for Unit III: 8
	2.1	Stratigies based on Retail location		2	
	2.2	Store Design		1	
	2.3	Store layout and Factors affecting Store layouts		1	
	2.4	Retailing image mix , Store façade		1	
	2.5	Case Study		1	
IV	3	Retail Communication Mix	The Art of Retailing – A.J. Lamba	1	Total Lectures for Unit IV: 7
	3.1	Sales Promotion in Retailing		1	
	3.2	Advertising in Retailing		1	
	3.3	Public Relations in Retailing		1	
	3.4	Personal Selling in Retailing		1	
	3.5	Steps in planning retail communication		1	
	3.6	Case Study		1	
V	4	Retail Strategies : Differentiation Strategies	Retail Management – W. Steward	1	Total Lectures for Unit V: 7
	4.1	Growth Strategies		1	
	4.2	Expansion Strategies		1	
	4.3	Pricing Stratigies in Retail		1	
	4.4	Role of IT in retailing		1	
	4.5	Case Study		1	
				Total Lectures Required: 36	

HEAD

Department of Management Studies

P.R.M.I.T. & R. Badnera

Prof. Ram Meghe Institute of Technology & Research, Badnera
Department of Management Studies(M.B.A.)

Lesson Plan
Subject: Rural Marketing
Semester –IV (Session 2020-2021)
Subject Teacher: Prof. G.D. Pachaghare

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Remark
I	1	Rural Marketing Management Perspectives	C.S.G. Krishnamacharyulu & Lalitha Ramakrishnan, "Rural Marketing" – Text and Cases, Pearson Education	1	Total Lectures for Unit I: 6
	2	Rural – Urban Disparities, Challenges to Indian Marketer		2	
	3	Rural Marketing – Concept, Scope, Nature, Taxonomy Attractiveness		1	
	4	Urban Vs. Rural Marketing		1	
	5	Case study		1	
II	1	Rural consumer behavior – buyer characteristics	C.S.G. Krishnamacharyulu & Lalitha Ramakrishnan, "Rural Marketing" – Text and Cases, Pearson Education	1	Total Lectures for Unit II: 7
	2	Decision process and behavior patterns, evaluation procedure		2	
	3	Brand loyalty in rural markets		1	
	4	Rural Marketing-Innovation adoption		2	
	5	Case Study		1	
III	1	Information System for Rural Marketing – Concepts, Significance	C.S.G. Krishnamacharyulu & Lalitha Ramakrishnan, "Rural Marketing" – Text and Cases, Pearson Education C.S.G. Krishnamacharyulu & Lalitha Ramakrishnan, "Cases in rural marketing and integrated approach". Pearson education.	1	Total Lectures for Unit III: 8
	2	Internal Reporting System		1	
	3	Marketing Research System, Decision Support System		2	
	4	Selecting and Attracting Markets – Concepts and Process, Segmentation, Degrees, Bases, Segmentation guidelines		2	
	5	Targeting and Positioning		1	
	6	Case Study		1	
IV	1	Product Strategy for rural Markets, Concept and Significance	C.S.G. Krishnamacharyulu & Lalitha Ramakrishnan, "Rural Marketing" – Text and Cases, Pearson Education	2	Total Lectures for Unit IV: 9
	2	Product Mix and Product Item Decisions		2	
	3	Competitive Product Strategies		1	
	4	Pricing Strategy in Rural Marketing – Concept, Significance, Objectives, Pricing Strategy		2	
	5	Case Study		1	
V	1	Promotion towards rural audience	Robert Chambers, "Rural Development: Putting the last first", Pearson Education.	2	Total Lectures for Unit V: 7
	2	Exploring media, profiling target audience, designing right promotion strategy and campaign		2	
	3	Rural Distribution – Channels, old setup		1	
	4	New players, new approaches, coverage strategy		1	
	5	Case Study		1	
			Total Lectures Required	**36**	

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera

Unit No.	Topic No.	Topic with detail course outlines	Text and References	No. of Periods Allotted	Total
I	01	Introduction	Sales Promotion & Advertising Management by M.N. Mishra Advertising, sales and promotion Management by S.A Chunawala Sales Promotion Management by Bir Singh	01	7
	02	Sales Promotion & Marketing Mix		02	
	03	Nature and Scope of Sales Promotion		01	
	04	Types of Sales Promotion		02	
	05	Case Study		01	
II	01	Consumer Behavior & sales Promotion	Sales Promotion & Advertising Management by M.N. Mishra Advertising, sales and promotion Management by S.A Chunawala Sales Promotion Management by Bir Singh	02	7
	02	Deal Prone consumer		02	
	03	Economic Theories of promotion		02	
	04	Case Study		01	
III	01	Sales Promotion's Impact on Sales	Sales Promotion & Advertising Management by M.N. Mishra Advertising, sales and promotion Management by S.A Chunawala Sales Promotion Management by Bir Singh	01	8
	02	Sales promotion experiments		02	
	03	Evaluation of Sales promotion experiments		02	
	04	Choice & purchase timing models		02	
	05	Case study		01	
IV	01	Introduction to Sales promotion planning	Sales Promotion & Advertising Management by M.N. Mishra Advertising, sales and promotion Management by S.A Chunawala Sales Promotion Management by Bir Singh	01	7
	02	Process of Sales promotion planning		02	
	03	Introduction to sales promotion budget		01	
	04	Process of sales promotion budget		01	
	05	Approaches to sales promotion budget		01	
	06	Case Study		01	
V	01	Designing Promotional strategies	Sales Promotion & Advertising Management by M.N. Mishra Advertising, sales and promotion Management by S.A Chunawala Sales Promotion Management by Bir Singh	02	7
	02	Strategic issues in designing promotional strategies		01	
	03	Substantive Findings Coupons		01	
	04	Issues on Coupons		01	
	05	Trade dealings		01	
	06	Case study		01	
			Total Lectures Required: 36		

HEAD
Department of Management Studies
P.R.M.I.T. & R. Badnera