

PART-A

SHORT ANSWER PATTERN 25 Marks

1. The Multidisciplinary nature of environmental studies

- . Definition, scope and importance.
- . Need for public awareness.

(2 lecture hours)

2. Social Issues and the Environment

- . From Unsustainable to Sustainable development
- . Urban problems related to energy
- . Water conservation, rain water harvesting, watershed management
- . Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- . Environmental ethics : Issues and possible solutions.
- . Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- . Wasteland reclamation.
- . Consumerism and waste products.
- . Environment Protection Act.
- . Air (Prevention and Control of Pollution) Act.
- . Water (Prevention and Control of Pollution) Act.
- . Wildlife Protection Act.
- . Forest Conservation Act.
- . Issues involved in enforcement of environmental legislation.
- . Public awareness. (7 lecture hours)

3. Human Population and the Environment

- . Population growth, variation among nations.
- . Population explosion - Family Welfare Programme.
- . Environment and human health.
- . Human Rights.
- . Value Education.
- . HIV / AIDS.
- . Women and Child Welfare.
- . Role of Information Technology in Environment and human health.
- . Case Studies. (6 lecture hours)

4. Natural resources :

- . **Renewable and non-renewable resources :**
 - . Natural resources and associated problems.
 - Forest resources : Use and over exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
 - Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
 - Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
 - Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer - pesticide problems, water logging, salinity, case studies.
 - Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies.
 - Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
 - . Role of an individual in conservation of natural resources.
 - . Equitable use of resources for sustainable lifestyles.

(8 lecture hours)

5. Ecosystems

- . Concept of an ecosystem.
- . Structure and function of an ecosystem.
- . Producers, consumers and decomposers.
- . Energy flow in the ecosystem.
- . Ecological succession.
- . Food chains, food webs and ecological pyramids.
- . Introduction, types, characteristic features, structure and function of the following ecosystem :-
 - Forest ecosystem
 - Grassland ecosystem
 - Desert ecosystem
 - Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lecture hours)

6. Biodiversity and its conservation

- . Introduction - Definition : genetic, species and ecosystem diversity.
- . Biogeographical classification of India.
- . Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values.
- . Biodiversity at global, National and local levels.
- . India as a mega-diversity nation.
- . Hot-spots of biodiversity.

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- Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India.
 - Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity. (8 lecture hours)

7. Environmental Pollution

- Definition
- Causes, effects and control measures of :-
 - Air pollution
 - Water pollution
 - Soil pollution
 - Marine pollution
 - Noise pollution
 - Thermal pollution
 - Nuclear hazards
- Solid Waste Management : Causes, effects and control measures of
 - Role of an individual in prevention of pollution.
 - Pollution case studies.
 - Disaster management : floods, earthquake, cyclone and landslides. (8 lecture hours)

PART-C ESSAY ON FIELD WORK 25 Marks

8. Field work

- Visit to a local area to document environmental assets - river / forest / grass land / hill / mountain
- Visit to a local polluted site - Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems - pond, river, hill slopes, etc. (5 lecture hours)

- (Notes : i) Contents of the syllabys mentioned under paras 1 to 8 shall be for teaching for the examination based on Annual Pattern.
- ii) Contents of the syllabys mentioned under paras 1 to 4 shall be for teaching to the Semester commencing first, and
- iii) Contents of the syllabys mentioned under paras 5 to 8 shall be for teaching to the Semester commencing later.

LIST OF REFERENCES :-

- Agarwal, K.C., 2001, Environmental Biology, Nidi Publ. Ltd., Bikaner.
- Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad - 380 013, India, Email : mapin@icenet.net (R)
- Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p.
- Clark R.S., Marine Pollution, Clanderson Press Oxford (TB)

ES-4

- Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T., 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p.
- De A.K., Environmental Chemistry, Wiley Eastern Ltd.
- Down to Earth, Centre for Science and Environment (R)
- Gleick, H.P. 1993, Water in Crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press. 473p.
- Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Mumbai (R)
- Heywood, V.H. & Watson, R.T. 1995, Global Biodiversity Assessment, Cambridge Univ. Press 1140p
- Jadhav, H & Bhosale, V.M. 1995, Environmental Protection and Laws, Himalaya Pub. House, Delhi. 284 p.
- Mckinney, M.L. & Schoch, R.M. 1996, Environmental Science Systems & Solutions, Web Enhanced Edition. 639 p.
- Mhaskar A.K., Matter Hazardous, Techno-Science Publications (TB)
- Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co. (TB)
- Odum, E.P., 1971, Fundamentals of Ecology, W.B.Saunders Co., U.S.A., 574p.
- Rao M.N. & Datta A.K., 1987, Waste Water Treatment, Oxford & IBH Publ. Co. Pvt. Ltd. 345 p.
- Sharma B.K., 2001, Environmental Chemistry, Goel Publ. House, Meerut.
- Survey of the Environment, The Hindu (M)
- Townsend C., Harper J., and Michael Begon, Essentials of Ecology, Blackwell Science (TB)
- Trivedi R.K., Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards, Vol. I and II, Enviro Media (R)
- Trivedi R.K. and P.K. Goel, Introduction to Air Pollution, Techno-Science Publications (TB)
- Wagner K.D., 1998, Environmental Management, W.B.Saunders Co., Philadelphia, USA 499p.
- डॉ. विठ्ठल घारपुरे : पर्यावरणशास्त्र- पिंपळापूरे अॅन्ड कंपनी पब्लीशर्स, नागपूर.(R)
- Dr. Deshpande, A.P.Dr. Chudiwale, A.D., Dr. Joshi, P.P., Dr. Lad, A.B.: Environmental Studies, Pimpalpure & Co., Publishers, Nagpur. (R)
- R.Rajagopalan : Environmental Studies, Oxford University Press, New Delhi, 2005 (R)

(M) Magazine
(R) Reference
(TB) Textbook

Reference Books:

1. Naraynan K. L., Kannaiah P. – Engineering Drawing, Scitech.
2. Jolhe D. A. – Engineering Drawing, Tata McGraw Hill Publication, 2008.

1B8 ENGINEERING GRAPHICS – LAB.

List of Practicals :

Every student will submit a set of at least SIX drawing sheets (from 1 to 7 listed below) and perform at least TWO practical (from 8 to 10 listed below) using CAD software. Examination will consist of viva-voce based on the syllabus.

1. Loci of points of various mechanisms
2. Projection of straight line
3. Projection of plane
4. Orthographic projection
5. Projection of solids
6. Isometric projection/view
7. Free hand sketches of simple machine elements, like :
 - (a) Screw threads ISI profile
 - (b) Types of nuts, bolts, studs, set screws, washers, locking arrangement of nuts & bolts
 - (c) Foundation bolts – Rag, eye, lewis types
8. Drafting of basic 2D geometrical shapes using CAD software
9. Drafting of basic 3D geometrical shapes using CAD software
10. Drafting of 2D and 3D objects using surface modeling commands

ENGLISH COMMUNICATION SKILLS LABORATORY - 1B5

Teaching Scheme: Practical: 4Hrs. / week

Examination Scheme : Internal Test :25 marks

External Practical examination : 25 marks

Course Outcomes:

- The learning outcome of students will be assessed through assignments, tests and final exams and most importantly through practical performances.
- Through these tests, it would be revealed that students are able to reproduce their understanding of concepts/principles of communication in English language.
- Students can present themselves well in front of large audience on a variety of topics. Moreover they get the knack for structured conversation to make their point of views clear to the listeners.

PRACTICALS:

Exercise 1: Types of communication, barriers to communication, effective communication

Exercise 2: Foundation of language: grammaticality and acceptability, word power, accuracy and appropriateness.

Exercise 3: Assignment on vocabulary building & Writing skill :nature of writing, stages of writing (pre, while and post), qualities of effective writing, what makes writing poor, the what, howand why of writing, drafting, summarizing, letter writing, writing reports.

Exercise 4: Speaking: pronunciation, stress, intonation and pauses, formal and informal expressions, conversation skills, presentation skills, business etiquette.

Exercise 5: Group Discussion- To study about group discussion technique.

Exercise 6: Interview skill- To study about personal interview.

Exercise 7: Planning and Mot- To study how to plan and execute an activity in a group.

Exercise 8: Seminar skill- To study how to conduct and deliver a seminar.

Exercise 9: Conference – To study how to conduct conference.

Exercise 10: Interpersonal communication- Conduct an activity for social cause.

Exercise 11: Project- Writing class newsletter.

Reference Books:

1. S. Mishra & C. Muralikrishna, “Communication Skills for Engineers”, Pearson Education.
2. T.M. Farhathullah , “Communication Skills for Technical Students”, Orient Longman.
3. Saran Freeman, “Written Communication in English”, Orient Longman.
4. Raymond Murphy, “Essential English Grammar (Elementary & Intermediate)”, CUP.
5. Shirley Tailor, “Communication for Business: A Practical Approach”, Longman Developing .
6. Krishna Mohan &MeeraBanerji, “ Communication Skills”, Macmillan.
7. R. C. Sharma & Krishna Mohan, “Business Correspondence and Report Writing”, Tata McGraw Hill.

Websites:

- <http://www.englishpage.com>
- <http://www.english-4u.de/>
- <http://www.nonstopenglish.com/>
- <http://www.business-english.com>
- <http://www.breakingnewsenglish.com/>
- <http://www.ello.org/>

A Guide to Induction Program

1 Introduction

(Induction Program was discussed and approved for all colleges by AICTE in March 2017. It was discussed and accepted by the Council of IITs for all IITs in August 2016. It was originally proposed by a Committee of IIT Directors and accepted at the meeting of all IIT Directors in March 2016.¹ This guide has been prepared based on the Report of the Committee of IIT Directors and the experience gained through its pilot implementation in July 2016 as accepted by the Council of IITs. Purpose of this document is to help institutions in understanding the spirit of the accepted Induction Program and implementing it.)

Engineering colleges were established to train graduates well in the branch/department of admission, have a holistic outlook, and have a desire to work for national needs and beyond.

The graduating student must have knowledge and skills in the area of his study. However, he must also have broad understanding of society and relationships. Character needs to be nurtured as an essential quality by which he would understand and fulfill his responsibility as an engineer, a citizen and a human being. Besides the above, several meta-skills and underlying values are needed.

There is a mad rush for engineering today, without the student determining for himself his interests and his goals. This is a major factor in the current state of demotivation towards studies that exists among UG students.

The success of gaining admission into a desired institution but failure in getting the desired branch, with peer pressure generating its own problems, leads to a peer environment that is demotivating and corrosive. Start of hostel life without close parental supervision at the same time, further worsens it with also a poor daily routine.

To come out of this situation, a multi-pronged approach is needed. One will have to work closely with the newly joined students in making them feel comfortable, allow them to explore their academic interests and activities, reduce competition and make them

¹A Committee of IIT Directors was setup in the 152nd Meeting of IIT Directors on 6th September 2015 at IIT Patna, on how to motivate undergraduate students at IITs towards studies, and to develop verbal ability. The Committee submitted its report on 19th January 2016. It was considered at the 153rd Meeting of all IIT Directors at IIT Mandi on 26 March 2016, and the accepted report came out on 31 March 2016. The Induction Program was an important recommendation, and its pilot was implemented by three IITs, namely, IIT(BHU), IIT Mandi and IIT Patna in July 2016. At the 50th meeting of the Council of IITs on 23 August 2016, recommendation on the Induction Program and the report of its pilot implementation were discussed and the program was accepted for all IITs.

work for excellence, promote bonding within them, build relations between teachers and students, give a broader view of life, and build character.

2 Induction Program :

When new students enter an institution, they come with diverse thoughts, backgrounds and preparations. It is important to help them adjust to the new environment and inculcate in them the ethos of the institution with a sense of larger purpose. Precious little is done by most of the institutions, except for an orientation program lasting a couple of days.

We propose a 3-week long induction program for the UG students entering the institution, right at the start. Normal classes start only after the induction program is over. Its purpose is to make the students feel comfortable in their new environment, open them up, set a healthy daily routine, create bonding in the batch as well as between faculty and students, develop awareness, sensitivity and understanding of the self, people around them, society at large, and nature. 2

The time during the Induction Program is also used to rectify some critical lacunas, for example, English background, for those students who have deficiency in it.

The following are the activities under the induction program in which the student would be fully engaged throughout the day for the entire duration of the program.

2 Induction Program as described here borrows from three programs running earlier at different institutions: (1) Foundation Program running at IIT Gandhinagar since July 2011, (2) Human Values course running at IIIT Hyderabad since July 2005, and (3) Counselling Service or mentorship running at several IITs for many decades. Contribution of each one is described next.

(1) IIT Gandhinagar was the first IIT to recognize and implement a special 5-week Foundation Program for the incoming 1st year UG students. It took a bold step that the normal classes would start only after the five week period. It involved activities such as games, art, etc., and also science and other creative workshops and lectures by resource persons from outside.

(2) IIIT Hyderabad was the first one to implement a compulsory course on Human Values. Under it, classes were held by faculty through discussions in small groups of students, rather than in lecture mode. Moreover, faculty from all departments got involved in conducting the group discussions under the course. The content is non-sectarian, and the mode is dialogical rather than sermonising or lecturing. Faculty were trained beforehand, to conduct these discussions and to guide students on issues of life.

(3) Counselling at some of the IITs involves setting up mentor-mentee network under which 1st year students would be divided into small groups, each assigned a senior student as a student guide, and a faculty member as a mentor. Thus, a new student gets connected to a faculty member as well as a senior student, to whom he/she could go to in case of any difficulty whether psychological, financial, academic, or otherwise.

The Induction Program defined here amalgamates all the three into an integrated whole, which leads to its high effectiveness in terms of building physical activity, creativity, bonding, and character. It develops sensitivity towards self and one's relationships, builds awareness about others and society beyond the individual, and also in bonding with their own batch-mates and a senior student besides a faculty member. Scaling up the above amalgamation to an intake batch of 1000 plus students was done at IIT(BHU), Varanasi starting from July 2016.

2.1 Physical Activity :

This would involve a daily routine of physical activity with games and sports. It would start with all students coming to the field at 6 am for light physical exercise or yoga. There would also be games in the evening or at other suitable times according to the local climate. These would help develop team work. Each student should pick one game and learn it for three weeks. There could also be gardening or other suitably designed activity where labour yields fruits from nature.

2.2 Creative Arts :

Every student would chose one skill related to the arts whether visual arts or performing arts. Examples are painting, sculpture, pottery, music, dance etc. The student would pursue it everyday for the duration of the program.

These would allow for creative expression. It would develop a sense of aesthetics and also enhance creativity which would, hopefully, flow into engineering design later.

2.3 Universal Human Values :

It gets the student to explore oneself and allows one to experience the joy of learning, stand up to peer pressure, take decisions with courage, be aware of relationships with colleagues and supporting staff in the hostel and department, be sensitive to others, etc. Need for character building has been underlined earlier. A module in Universal Human Values provides the base.

Methodology of teaching this content is extremely important. It must not be through do's and dont's, but get students to explore and think by engaging them in a dialogue. It is best taught through group discussions and real life activities rather than lecturing. The role of group discussions, however, with clarity of thought of the teachers cannot be over emphasized. It is essential for giving exposure, guiding thoughts, and realizing values.

The teachers must come from all the departments rather than only one department like HSS or from outside of the Institute. Experiments in this direction at IIT(BHU) are noteworthy and one can learn from them.³

Discussions would be conducted in small groups of about 20 students with a faculty mentor each. It is to open thinking towards the self. Universal Human Values discussions could even continue for rest of the semester as a normal course, and not stop with the induction program.

Besides drawing the attention of the student to larger issues of life, it would build relationships between teachers and students which last for their entire 4-year stay and possibly beyond.

3The Universal Human Values Course is a result of a long series of experiments at educational institutes starting from IIT-Delhi and IIT Kanpur in the 1980s and 1990s as an elective course, NIT Raipur in late 1990s as a compulsory one-week off campus program. The courses at IIT(BHU) which started from July 2014, are taken and developed from two compulsory courses at IIIT Hyderabad first introduced in July 2005.

2.4 Literary

Literary activity would encompass reading, writing and possibly, debating, enacting a play etc.

2.5 Proficiency Modules

This period can be used to overcome some critical lacunas that students might have, for example, English, computer familiarity etc. These should run like crash courses, so that when normal courses start after the induction program, the student has overcome the lacunas substantially. We hope that problems arising due to lack of English skills, wherein students start lagging behind or failing in several subjects, for no fault of theirs, would, hopefully, become a thing of the past.

2.6 Lectures by Eminent People

This period can be utilized for lectures by eminent people, say, once a week. It would give the students exposure to people who are socially active or in public life.

2.7 Visits to Local Area

A couple of visits to the landmarks of the city, or a hospital or orphanage could be organized. This would familiarize them with the area as well as expose them to the under privileged.

2.8 Familiarization to Dept./Branch & Innovations

The students should be told about different method of study compared to coaching that is needed at IITs. They should be told about what getting into a branch or department means what role it plays in society, through its technology. They should also be shown the laboratories, workshops & other facilities.

3 Schedule

The activities during the Induction Program would have an Initial Phase, a Regular Phase and a Closing Phase. The Initial and Closing Phases would be two days each.

3.1 Initial Phase

<i>Time</i>	<i>Activity</i>
Day 0	
<i>Whole day</i>	<i>Students arrive - Hostel allotment. (Preferably do preallotment)</i>
Day 1 <i>09:00 am - 03:00 pm</i>	<i>Academic registration</i>
<i>04:30 pm - 06:00 pm</i>	<i>Orientation</i>
Day 2 <i>09:00 am - 10:00 am</i>	<i>Diagnostic test (for English etc.)</i>
<i>10:15 am - 12:25 pm</i>	<i>Visit to respective depts.</i>
<i>12:30 pm - 01:55 pm</i>	<i>Lunch</i>
<i>02:00 pm - 02:55 pm</i>	<i>Director's address</i>
<i>03:00 pm - 05:00 pm</i>	<i>Interaction with parents</i>
<i>03:30 pm - 05:00 pm</i>	<i>Mentor-mentee groups - Introduction within group. (Same as Universal Human Values groups)</i>

3.2 Regular Phase

After two days is the start of the Regular Phase of induction. With this phase there would be regular program to be followed every day.

3.2.1 Daily Schedule

Some of the activities are on a daily basis, while some others are at specified periods within the Induction Program. We first show a typical daily timetable.

<i>Sessn.</i>	<i>Time</i>	<i>Activity</i>	<i>Remarks</i>
	Day 3 onwards 06:00 am	<i>Wake up call</i>	
<i>I</i>	06:30 am - 07:10 am	Physical activity (mild exercise/yoga)	
	<i>07:15 am - 08:55 am</i>	<i>Bath, Breakfast, etc.</i>	
<i>II</i>	09:00 am - 10:55 am	Creative Arts / Universal Human Values	Half the groups do Creative Arts
<i>III</i>	III 11:00 am - 12:55pm	Universal Human Values / Creative Arts	Complementary alternate
	<i>01:00 pm - 02:25 pm</i>	<i>Lunch</i>	
<i>IV</i>	02:30 pm - 03:55 pm	Afternoon Session	See below.
<i>V</i>	04:00 pm - 05:00 pm	Afternoon Session	See below.
	<i>05:00 pm - 05:25 pm</i>	<i>Break / light tea</i>	
<i>VI</i>	05:30 pm -06:45pm	Games / Special Lectures	
	<i>06:50 pm - 08:25 pm</i>	<i>Rest and Dinner</i>	
<i>VII</i>	08:30pm - 09:25pm	Informal interactions (in hostels)	

Sundays are off. Saturdays have the same schedule as above or have outings.

3.2.2 Afternoon Activities (Non-Daily)

The following five activities are scheduled at different times of the Induction Program, and are not held daily for everyone:

1. Familiarization to Dept./Branch & Innovations
2. Visits to Local Area
3. Lectures by Eminent People
4. Literary
5. Proficiency Modules

Here is the approximate activity schedule for the afternoons (may be changed to suit local needs):

<i>Activity</i>	<i>Session</i>	<i>Remarks</i>
Familiarization with Dept/Branch & Innovations	IV	For 3 days (Day 3 to 5)
Visits to Local Area	IV, V and VI	For3 days-interspersed(e.g.,3 Saturdays)
Lectures by Eminent People	IV	As scheduled - 3-5 lectures
Literary (Play / Book Reading / Lecture)	IV	<i>For 3-5 days</i>
Proficiency Modules	V	Daily, but only for those who need it

3.3 Closing Phase

<i>Time</i>	<i>Activity</i>
Last But One Day 08:30 am - 12 noon	Discussions and finalization of presentation within each group
02:00 am - 05:00 pm	Presentation by each group in front of 4 other groups besides their own (about 100 students)
Last Day Whole day	Examinations (if any). May be expanded to last 2 days, in case needed.

3.4 Follow Up after Closure

A question comes up as to what would be the follow up program after the formal 3-week Induction Program is over? The groups which are formed should function as mentormentee network. A student should feel free to approach his faculty mentor or the student guide, when facing any kind of problem, whether academic or financial or psychological etc. (For every 10 undergraduate first year students, there would be a senior student as a *student guide*, and for every 20 students, there would be a *faculty mentor*.) Such a group should remain for the entire 4-5 year duration of the stay of the student. Therefore, it would be good to have groups with the students as well as teachers from the same department/discipline.

Here we list some important suggestions which have come up and which have been experimented with.

3.4.1 Follow Up after Closure – Same Semester

It is suggested that the groups meet with their faculty mentors once a month, within the semester after the 3-week Induction Program is over. This should be a scheduled meeting shown in the timetable. (The groups are of course free to meet together on their own more often, for the student groups to be invited to their faculty mentor's home for dinner or tea, nature walk, etc.)

3.4.2 Follow Up – Subsequent Semesters

It is extremely important that continuity be maintained in subsequent semesters. It is suggested that at the start of the subsequent semesters (upto fourth semester), three days be set aside for three full days of activities related to follow up to Induction Program. The students be shown inspiring films, do collective art work, and group discussions be conducted. Subsequently, the groups should meet at least once a month.

4 Summary

Engineering institutions were set up to generate well trained manpower in engineering with a feeling of responsibility towards oneself, one's family, and society. The incoming undergraduate students are driven by their parents and society to join engineering without understanding their own interests and talents. As a result, most students fail to link up with the goals of their own institution.

The graduating student must have values as a human being, and knowledge and metaskills related to his/her profession as an engineer and as a citizen. Most students who get demotivated to study engineering or their branch, also lose interest in learning.

The *Induction Program* is designed to make the newly joined students feel comfortable, sensitize them towards exploring their academic interests and activities, reducing competition and making them work for excellence, promote bonding within them, build relations between teachers and students, give a broader view of life, and building of character.

The *Universal Human Values* component, which acts as an anchor, develops awareness and sensitivity, feeling of equality, compassion and oneness, draw attention to society and

4We are aware that there are advantages in mixing the students from different depts. However, in mixing, it is our experience that the continuity of the group together with the faculty mentor breaks down soon after. Therefore, the groups be from the same dept. but hostel wings have the mixed students from different depts. For example, the hostel room allotment should be in alphabetical order irrespective of dept.

nature, and character to follow through. It also makes them reflect on their relationship with their families and extended family in the college (with hostel staff and others). It also connects students with each other and with teachers so that they can share any difficulty they might be facing and seek help.

References:

Motivating UG Students Towards Studies,

Rajeev Sangal, IITBHU Varanasi, Gautam Biswas, IIT Guwahati, Timothy Gonsalves, IIT Mandi, Pushpak Bhattacharya, IIT Patna, (Committee of IIT Directors), 31 March 2016, IIT Directors' Secretariat, IIT Delhi.

Contact:

Prof. Rajeev Sangal

Director, IIT(BHU), Varanasi

(director@iitbhu.ac.in)

18 June 2017

8CE 05: WATER RESOURCES ENGINEERING – II – Lab

TERM WORK: Five problems from the following to be worked out by the students, whenever necessary scale drawing on half empirical size must be drawn:

Practical examination shall consist of viva – voce.

1. Fixing control levels of Reservoir from given data.
2. Cross section, plan, L-section of Earth dam showing all components; Details of drainage of downstream casing.
3. Design and Drawing of elementary and practical profile of gravity dam.
4. Design and drawing of diversion weir on permeable foundation.
5. Design and Drawing of ogee spillway with energy dissipaters.
6. Computer Aided design of unlined and lined canal.
7. Drawing of any four canal structure (No design)
8. Technical Field visit.

8CEO2: ENVIRONMENTAL ENGINEERING – II

SECTION –A

Unit-I

Quantity of storm water, DWF, variation of sewage, flow systems of sewerage - separate combined and partially combined, layouts of sewerage system, capacity of sewers design of sewers Laying out of circular sewers-Boning rod and sight rail method, Testing & maintenance of sewers.

Unit-II

Waste water characteristic, sampling of sewage, physical chemical and biological examinations, B.O.D. and C.O.D., B.O.D. equation, problems on B.O.D Pollution due to domestic and industrial waste. Treatment of sewage - purpose of treatment, preliminary treatment, primary treatment and secondary treatment. Flow diagram for conventional sewage treatment plant. Preliminary Treatment:- Screening, Grit chamber, detritus tank. Primary Treatment:- Sedimentation of sewage.

Unit-III

Biological treatment: Trickling filters, low rate & high rate tricking filters, construction details, Re- circulation Modification of trickling filters Activated sludge process - Process description, Methods of aeration, loading rates, Different modified forms of A.S.P., MLSS & SVI, F/M.

SECTION –B

Unit-IV

Low cost waste treatments - Oxidation ponds, Aerated Lagoon, Treatment and Disposal of sludge - Digestion of sludge, sludge disposal Septic tank, working and design, Disposal of septic tank effluent Disposal of sewage on land and in stream. Effluent standards for disposal on land, into stream and into sewers. MINAS. Self purification capacity of stream

Unit-V

Characteristics of solid waste:- Physical, chemical, biological Analysis. Collection of solid waste:- Types of collection system and services, frequency of collection, methodology involved in setting up collection bins Disposal of solid wastes:- Different methods, sanitary land fill, composting, incineration.

Unit-VI

Air pollution: Introduction to air pollution, various pollutants their sources and their effects on man and material, prevention or air pollution at sources, introduction to control devices electrostatic precipitator & cyclones only human tolerance level Introduction to EIA and Environmental Audit.

Books Recommended :

- 1) Kshirsagar S.R. : Sewerage and Sewage Treatment, Roorkee Pub House, Roorkee.
- 2) Steel E.W. Steel : Water Supply & Sewerage, McGraw Hill Book Co.
- 3) Birdie G.S. : Water Supply and Sanitary Engineering, Dhanpat Rai & Son's.
- 4) Garg S.K. : Waste Water Engineering.
- 5) Dr. Bhide A.D., Sunderson B.B. : Solid Waste Management in Developing Countries.
- 6) Rao H.V.N. : Air Pollution.
- 7) Stern, Wohlers, Boobel, Lowry : Fundamentals of Air Pollution, Academic Press, 1973.

6CE02: Environmental Engineering – I

Course Objectives: -

- To make the students conversant with sources and its demand of water
- To understand the basic characteristics of water and its determination
- To expose the students to understand the design of water supply lines
- To provide adequate knowledge about the water treatment processes and its design
- To have adequate knowledge on operation and maintenance of water supply

Course Outcomes: -

- Define and explain the significance of terms and parameters frequently used in water supply engineering.
- Evaluate the influence of the different parameter in design and treatment of water treatment plant (water quality parameters).
- Basic methodology for water treatment (viz., sedimentation, coagulation, flocculation, filtration, disinfection and water softening.)
- An understanding of water quality criteria and standards, and their relation to public health.

SECTION – A

Unit-I : Quantity Estimation of water: Demand of water. Consumption for various purposes. Fire Demand, Per capita demand. Factors affecting consumption. Fluctuation in demand. Design period, forecasting population.

Sources: Surface sources, ground water sources, Infiltration Galleries, Relative merits of sources, assessment & suitability, selection.

Unit-II :Water quality: Impurities in water, their effects and significance water borne diseases, collection of water samples. Water analysis- physical, chemical and bacteriological. Water quality standards: I.S. & WHO, Flow diagrams and layouts of different water treatment works. Intakes- type, location, requirement & features.

Unit-III: Aeration: Purpose, types of gravity aerators & spray aerators.

Sedimentation: Plain and with coagulation, different coagulants used, dose of coagulant, Jar test, Flocculation, clarifloculator. Design criteria for sedimentation tanks, surface loading, simple problems on design of sedimentation tanks.

SECTION – B

Unit-IV: Filtration: - Rapid sand and slow sand filters, filter media, Rate of filtration, under drainage system and washing process. Control system, Negative head, operating difficulties, pressure filter; Simple design problems on rapid sand filters.

Unit V:Disinfection: - Requirement of good disinfectant, methods of disinfection. Chlorination: Methods, prechlorination, post chlorination. Break point chlorination and super chlorination, forms of chlorine. Use of bleaching powder - Simple problems. Introduction to tertiary treatments-Softening and Defloridation.

Unit-VI: Distribution system: - Types of supply: Continuous, and intermittent. Types of system: Gravity, Pumping and combined gravity and pumping, Layouts of distributions system. Maintenance of distribution system. Equalizing storage, Type of storage reservoirs, capacity. Types of conduits, joints, appurtenances. Pipe laying and testing.

Books Recommended:

1. Steel E. W., “Water Supply and Sewerage”, Mc-Graw Hill.
2. Kshirsagar S. R., “Water Supply Engineering”, Roorkee Pub house, Roorkee.
3. Birde G. S. , “Water Supply and Sanitary Engineering”, Dhanpat Rai and Sons, Delhi.
4. Punmia B. C. “water Supply Engineering”. Laxmi publication.
5. Garg S.K. Water Supply Engineering, Khanna Publishers.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2019 - PART TWO - 365

Expt -9	To analyze the performance of baseband system using Eye diagram.	
Expt -10	Implementation of cyclic Encoding and Decoding of BCD bit Sequence.	
Expt -11		
Expt -12	To analyze the performance of Amplitude Shift keying (ASK).	
Expt -13	To analyze and compare performance of 1) Phase Shift Keying (PSK). 2) Differential Phase Shift Keying (DPSK). 3) Quadrature Phase Shift Keying (QPSK)	
Expt -14	Generation of PN sequence and to determine auto and cross correlation..	
Expt -15	To implement Shanon-Fano / Huffman coding using MATLAB.	
	* Minimum 10 experiments based on/relevant to the above list.	

NOTIFICATION

No. 80 /2019

Date : 26 /07/2019

Subject :- Implementation of revised Syllabi prescribed for Sem. VII & VIII B.E. (Electronics & Telecommunication Engg.) (CGS) for the session 2019-2020 & onwards.

It is notified for general information of all concerned that the authorities of the University has accepted the revised syllabi of Semester VII & VIII B.E. (Electronics & Telecommunication Engg.) (CGS) from the session 2019-2020 and onwards as per **Appendix – A** given below :-

Sd/-
(Dr.H.R.Deshmukh)
I/c. Registrar
Sant Gadge Baba Amravati University

Appendix – A

SEMESTER – VII

Subject (Th): 7ET1- VLSI DESIGN

Course Pre-requisites: 1. (3ET3) Electronic Devices & Circuits.
2. (4ET4) Digital Electronics

Course Objectives:

1. To study CMOS transistor theory and performance parameters.
2. To learn design of digital VLSI circuits, computer aided simulation and synthesis tools on programmable chips (FPGA/CPLD) using Verilog HDL.
3. To be aware of manufacturing process in VLSI technology.
4. To study layout design rules for size & power optimization.

Course Outcomes: After successfully completing the course, the students will be able to:

1. Gain knowledge about the trends in VLSI semiconductor technology and it's impacts on scaling and performance.
2. Draw Layout, Stick diagrams of simple CMOS Circuits.
3. Understand Front & Back end design aspects of simple VLSI Digital circuits.
4. Model digital circuits with Verilog HDL, simulate, synthesize and prototype in PLDs.

Unit-1 : CMOS Circuit Design-I: Moore's Law, MOS structure capacitance, Channel capacitance, Junction capacitance, MOS Transistor Switches, CMOS Logic gates, CMOS Inverter - DC Characteristics, CMOS combinational logic design, Introduction to Delays in CMOS, Power consumption / Dissipation Issues. [T1, T2, R1]
(09)

Unit-2 CMOS Circuit Design-II: Clocked Latch and Flip-Flop Circuits, CMOS Transmission Gates (Pass Gates), Static Read - Write Memory (SRAM) Circuits, Dynamic Read-Write Memory (DRAM) Circuits.. [T1, T2, R1]
(08)

Unit-3 CMOS Technology & Design Rules: CMOS fabrication processing steps, p-well CMOS Process, n-well CMOS Process, Twin well process, Silicon-on-Insulator Process, CMOS Process enhancements –Interconnect, Circuit Elements, CMOS Lambda-based Design Rules, Stick Diagrams, Physical layout of simple CMOS Logic Gates. [T1, T2, R2, R3, R6]
(08)

7ET4 INDUSTRIAL MANAGEMENT AND QUALITY CONTROL

Course requisites: 1. (6ET6) Communication Skills.

Course Objectives:

1. To understand management, administration and organization in terms of principles and functions.
2. To interpret marketing, materials, production, finance and personnel management.
3. To understand project report, concept of budget and their components.
4. To study concept of quality, business ethics and analyze various quality control techniques.

Course Outcomes: After completing the course, the students will be able to:

1. Practice the fundamental principles and functions of business management.
2. Recognize and apply knowledge of marketing and materials management.
3. Interpret and evaluate personnel management and evaluation methods of job rating.
4. Evaluate balance sheet, costing and budgetary aspects, project report, profit and loss statement and ratio analysis.
5. Identify factors controlling quality of design and conformance.
6. Apply professional ethics, Kaizen, Quality Circles, ISO-9000 series and TQM in organization.

Unit-1 Principles and Techniques of Management : Meaning of and differences among business management, administration and organization, functions of management, planning, organization structure, motivation, delegation and decentralization, communication, leadership and decision making. (08)

Unit-2 Market and Materials Management : A) Marketing strategy, market research, consumer behavior, advertising and sales promotion, channels of distribution, pricing of products. B) Classes of material, scope of material control, purchasing procedures, order procedures, inventory control, types of production. (10)

Unit-3 Personnel Management : Meaning and functions of personnel management, recruitment, selection, promotion, wages and salary administration, training and development, functions and scope of trade unions in Indian industries. Welfare of labour, Problems of labour turn over & retention. Merit Rating: Job evaluation, different methods of merit ratings. (08)

Unit-4 Project and Financial Management: A) Case studies of project report, preparation of profit and loss statement and balance sheet. B) Principles of costing, cost sheet preparation, types of budgets and their importance. (08)

Unit-5 Quality Control : Concept of quality and quality control, elements of quality, factors controlling quality of design and conformance, process control, inspection planning and scheduling, 7QC (Seven Quality Control) techniques, vendor inspection, sampling plans, Quality audit system. (10)

Unit-6 Quality Management and Professional Ethics : Concepts and applications of Kaizen, quality circle, ISO 9000 series, just-in-time, quality planning and total quality management, elements of TQM. Professional business ethics: concept, ethical business codes and values. (08) [Total 52]

Text Books:

1. O.P.Khanna, "Industrial Engineering and Management", Dhanpat Rai Publications.
2. Telsang Martand.T., "Industrial and Business Management", S.Chand Publications.
3. Anil Bhat, Arya Kumar, "Management: Principles, Processes and Practices", Oxford University Press.
4. Bharat Wakhlu, "Total Quality", S. Chand Publications.
5. Armand V. Feigenbaum, "Total Quality Control", Tata Mc-Hill Education.

References :

1. M. Mahajan, "Industrial Engineering and Production Management", Dhanpat Rai & Sons, New Delhi.
2. Bose D. Chandra, "Fundamentals of Financial Management", PHI Learning Publications.
3. Abdul Matheen, "Project Management", Laxmi Publications.

7ET5 Prof. Elect. – I (i) COMPUTER ORGANIZATION

Course Requisite: 1. (4ET4) Digital Electronics
2. (5ET3) Microprocessor & Microcontroller

Course Objectives: To understand and gain complete knowledge about:

1. Understand the computer components, bus interconnections and different types of memories.
2. Learn the different types of data transfer techniques.
3. Understand the different types of instruction formats and addressing modes.
4. Aware of the difference between the RISC and CISC architecture.
5. Learn the concepts of microinstruction its sequencing and execution.
6. Understand the multiple processor organizations.

NOTIFICATION

No. 89/2020

Date : 26/10/2020

Subject : Implementation of new Syllabi of Semester III & IV of B.E. (C.B.C.S.) as per A.I.C.T.E. Model Curriculum...

It is notified for general information of all concerned that the authorities of the University have accepted to implement new Syllabi of Semester III & IV of B.E./B.Text. E./B.Tech. (Chem.Tech.) (Food, Pulp & Paper, Oil & Paint and Petrochemical Tech.) (C.B.C.S.) as per A.I.C.T.E. Model Curriculum to be implemented from the academic session 2020-21 & onwards as per "Appendix – A" as given below:

Sd/-
(Dr. T.R. Deshmukh)
Registrar

"Appendix – A"

SYLLABI OF B.E. SEM. III & IV (CIVIL ENGINEERING) [C.B.C.S.]

THIRD SEMESTER

3CE01 MATHEMATICS III

Objectives:-

- Find general solutions of linear differential equations with constant coefficients using the roots of the auxiliary equation.
- Calculate the Laplace Transform of basic functions using the definition.
- Compute the partial Differential Equations.
- Understand the computational details behind certain numerical methods.
- Compute the Analytic function.
- Compute and interpret the correlation coefficient.

Course Outcomes:

After successfully completing the course, the students will be able to:

1. Demonstrate the knowledge of differential equations and partial differential equations, applied to electrical engineering systems.
2. Apply Laplace transform to solve differential equations.
3. Demonstrate the use of Partial Differential Equations.
4. Compute different Numerical Methods.
5. Apply the knowledge of Complex Analysis.
6. Demonstrate the basic concepts of probability and statistics.

SECTION-A

Unit I : Ordinary Differential Equations :

Complete solution, Operator D, rules for finding the complementary function, the inverse operator, Rules for finding particular integral. Method of variation of parameters, Cauchy's and Legendre's Linear Differential equations. Simultaneous linear differential equations with constant coefficients Applications to civil engineering. (7)

Unit II: Laplace transforms:

Definition and elementary properties, Inverse L.T. by various methods, Convolution theorem, Solution of ordinary differential equation using Laplace transform of periodic functions. Application to problems of beams and fluids. (7)

Unit III : Partial Differential Equations :

P.D.E. of first order and first degree of types i) $f(p,q) = 0$ ii) $f(p,q,z)=0$, iii) $f(p,q,x,y)=0$ iv) $f(p,q,x,y,z)=0$ i.e. (a) Lagrange's form $Pp + Qq = R$ (b) Clairaut's form $z=px+qy+f(p,q)$ v) Equations reducible to above standard types linear Homogeneous P.D.E. of nth order with constant coefficients. (7)

4ETC09 – SIGNALS AND SYSTEMS - LAB

Course Requisite:

4ETC04 Signals & Systems.

Course Objectives:

1. To use software to visualize analysis of Signals and System.
2. To manipulate the time signals and identify the type of given system.

Course Outcomes:

1. After successful completion of this course, students will be able to
2. Generate different plots and explore results to draw valid conclusions and inferences in Signal Processing.
3. Enable on how to approach for requirement of signal processing and system design using simulation tools.
4. Familiarize with the concepts of sampling.

List of Experiments :

Experiment No.	Aim of Experiment
Expt - 1	Study of Signal Processing Functions used in MATLAB/SCILAB.
Expt – 2	Program to generate standard continuous Time Signals.
Expt - 3	Program to generate standard discrete Time Signals.
Expt - 4	Program to perform basic operations on Signals.
Expt – 5	Program to find Even And Odd parts of a signal.
Expt - 6	Program to check Periodicity of signals.
Expt – 7	Program to find the Energy and Power of a Signal.
Expt – 8	Program to identify a given system as linear/ non-linear, time variance/ invariance property of a given system.
Expt – 9	Program to demonstrate the time domain sampling of band limited signals (Nyquist theorem).
Expt – 10	Program to find Fourier transform of given signal.
Expt - 11	Implement system equation using Simulnk/Xcos to find output of system for different input signals.
Expt – 12	Find unit step response of system described by transfer function using Simulink/Xcos.

* Minimum 08 experiments should be conducted out of above enlisted.

4ETC05 – VALUES & ETHICS (HS)

Max. Marks: 80

Course Requisite:

Course Objectives:

1. Development of a holistic perspective based on self-exploration about themselves (human being), family, society, and nature/existence.
2. Understanding (or developing clarity) of the harmony in the human being, family, society and nature/existence
3. Strengthening of self-reflection.
4. Development of commitment and courage to act.

Course Outcomes:

By the end of the course, students are expected to become more aware of themselves, and their surroundings (family, society, nature); they would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind. They would have better critical ability. They would also become sensitive to their commitment towards what they have understood (human values, human relationship, and human society). It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.

	Subject: Values & Ethics	L
Unit-1	Course Introduction - Need, Basic Guidelines, Content and Process for Value Education Purpose and motivation for the course, recapitulation from Universal Human Values-I, Self-Exploration–what is it? - Its content and process; ‘Natural Acceptance’ and Experiential Validations the process for self-exploration, Continuous Happiness and Prosperity- A look at basic Human Aspirations, Right understanding, Relationship and Physical Facility- the basic requirements for fulfilment of aspirations of every human being with their correct priority, Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario, Method to fulfil the above human aspirations: understanding and living in harmony at various levels.	06
Unit-2	Understanding Harmony in the Human Being - Harmony in Myself Understanding human being as a co-existence of the sentient ‘I’ and the material ‘Body’, Understanding the needs of Self (‘I’) and ‘Body’ - happiness and physical facility, Understanding the Body as an instrument of ‘I’ (I being the doer, seer and enjoyer), Understanding the characteristics and activities of ‘I’ and harmony in ‘I’, Understanding the harmony of I with the Body: Sanyam and Health; correct appraisal of Physical needs, meaning of Prosperity.	06
Unit-3	Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship Understanding values in human-human relationship; meaning of Justice (nine universal values in relationships) and program for its fulfilment to ensure mutual happiness; Trust and Respect as the foundational values of relationship, Understanding the meaning of Trust; Difference between intention and competence, Understanding the meaning of Respect, Difference between respect and differentiation; the other salient values in relationship Incorporating Universal Human Values in Technical Education (An AICTE Initiative), Understanding the harmony in the society (society being an extension of family): Resolution, Prosperity, fearlessness (trust) and co-existence as comprehensive Human Goals.	06
Unit-4	Understanding Harmony in the Nature and Existence - Whole existence as Coexistence Understanding the harmony in the Nature, Interconnectedness, and mutual fulfilment among the four orders of nature- recyclability and self-regulation in nature, Understanding Existence as Co-existence of mutually interacting units in all-pervasive space, Holistic perception of harmony at all levels of existence.	06
Unit-5	Implications of the above Holistic Understanding of Harmony on Professional Ethics Natural acceptance of human values, Definitiveness of Ethical Human Conduct, Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order, Competence in professional ethics: a) Ability to utilize the professional competence for augmenting universal human order b) Ability to identify the scope and characteristics of people friendly and eco-friendly production systems, c) Ability to identify and develop appropriate technologies and management patterns for above production systems.	06
Unit-6	Case studies of typical holistic technologies, management models and production systems, Strategy for transition from the present state to Universal Human Order: a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers b) At the level of society: as mutually enriching institutions and organizations. (6 Hrs) Note: Include practice Exercises and Case Studies will be taken up in Practice (tutorial) Sessions eg. to discuss the conduct as an engineer or scientist etc.	06
	Total	36

Text Books and Teachers Manual :

1. A Foundation Course in Human Values and Professional Ethics, R.R. Gaur, R. Asthana, G.P. Bagaria, 2nd Revised Edition, Excel Books, New Delhi, 2019. ISBN 978-93-87034-47-1
2. Teachers’ Manual for A Foundation Course in Human Values and Professional Ethics, R.R. Gaur, R. Asthana, G.P. Bagaria, 2nd Revised Edition, Excel Books, New Delhi, 2019. ISBN 978-93-87034-53-2

Reference Books:

1. Jeevan Vidya: Ek Parichaya, A Nagaraj, Jeevan Vidya Prakashan, Amarkantak, 1999.
2. Human Values, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
3. The Story of Stuff (Book).
4. The Story of My Experiments with Truth - by Mohandas Karamchand Gandhi
5. Small is Beautiful - E. F Schumacher.
6. Slow is Beautiful - Cecile Andrews
7. Economy of Permanence - J C Kumarappa
8. Bharat Mein Angreji Raj - PanditSunderlal
9. Rediscovering India - by Dharampal
10. Hind Swaraj or Indian Home Rule - by Mohandas K. Gandhi
11. India Wins Freedom - Maulana Abdul Kalam Azad
12. Vivekananda - Romain Rolland (English)
13. Gandhi - Romain Rolland (English)

UNIT V :

Non-Linear Data Structure: Tree Trees: Terminology, Types, Binary trees and their representation in memory, traversing in binary trees using stacks. Binary Search Trees, searching, inserting and deleting nodes in binary trees, Heap tree, Path length & Huffman's algorithm, Spanning Trees, Basic concepts of Kruskal's and Prim's Algorithm, B+ tree. (6 Hrs)

UNIT VI :

Non-Linear Data Structure: Graph Graph: Definitions, Sequential and Linked-list representation of Graphs, Warshalls' algorithm, Bridges in graph, Johnsons algorithm. Graph Traversals: Breadth First Search, Depth First Search, Topological Sort, Shortest Path Algorithms: Unweighted Shortest Paths, Basic concepts of Dijkstra's Algorithm. (6 Hrs)

Text Books:

1. Mark Allen Weiss, 'Data Structures and Algorithm Analysis in C++', 3/e, Florida International University, ISBN 0-321-37531-9
2. Seymour Lipschutz, 'Theory & Problems of Data Structures', Schaum's Outline Series (Mc Graw-Hill) International Editions.

Reference Books:

1. John Hubbard: 'Schaum's Outline DataStructure with C++', ISBN-13: 978-0071353458
2. Jean-Paul Tremblay, Paul G. Sorenson, P. G. Sorenson, 'An Introduction to Data Structures With Applications', (McGraw-Hill Computer Science Series), ISBN-13: 978-0070651579
3. Ellis Horowitz, Sartaj Sahni, Rajasekaran, 'Computer Algorithms/C++', 2nd edition, 2019.

4 IT 05 SOCIAL SCIENCES & ENGINEERING ECONOMICS

SECTION - A

Unit I : Study of Social Science : Importance to Engineer, salient features of Indian constitution. Fundamental Rights and Duties. Directive Principles of State Policy. (8)

Unit II : Indian Parliament : Composition and powers, President of India : Election and Powers. Council of Ministers and Prime Minister (8)

Unit III : Impact of Science and Technology on culture and Civilization. Human Society: Community Groups. Marriage and Family: Functions, Types and problems. (8)

SECTION - B

Unit IV: Production : Factors of production, Laws of return, Forms of Business Organisation. (8)

Unit V : Banking : Functions of Central and Commercial Banks. Introduction to GST, Market : Forms, perfect, imperfect competition and monopoly. (8)

Unit VI: Nature and scope of Economics : Special significance of Economics to Engineers. Economics of Development : Meaning, Characteristics of under development, obstacles to Economic growth and vicious circle of poverty. (8)

Books Recommended :

1. Pylee M.V. : Constitutional Govt. in India, S.Chand and Co.
2. C N Shankar Rao: Sociology, S.Chand and Co.
3. Dewett and Varma J.D. : Elementary Economic Theory, S.Chand and Co.
4. A.N.Agrawal : Indian Economy, Problem of Development and Planning (Wiley Eastern Ltd), New Delhi.
5. S.K.Mishra : Indian Economy, Its Development Experience. Himalaya Pub.House, Bombay.
6. E.Kuper : Economics of W.R. Development, McGraw Hill Co.,
7. Brij Kishore Sharma. : The Constitution of India, PHI.
8. Mahajan : The Constitution of India, S.Chand, New Delhi.
9. Maclaver and Page : Principle of Sociology.
10. Davis K. : Human Society
11. Datt R.K. : Indian Economy, S.Chand and Comp. New Delhi P.M.Sundharam
12. Dhingra I.C. : Indian Economy
13. James L.E., R.R.Lee : Economics of W.R.Planning, McGraw Hill Co.

M.B.A. Exam. 2014
(Semester Pattern)

Prospectus No. 2014156

संत गाडगेबाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY

अभ्यासक्रमिका
वाणिज्य विद्याशाखा
(FACULTY OF COMMERCE)

PROSPECTUS

OF

MASTER OF BUSINESS ADMINISTRATION
(Semester Pattern Two Year Degree Course)
Semester - I & III Exam. Winter-2014
Semester - II & IV Exam. Summer - 2015



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will be shown by the grade. The students getting 'D' grade fails in the paper.

Scheme of Examination of Dissertation

Assessment of papers M.B.A. 307 & M.B.A.407 i.e. Dissertation shall be done by internal and external examiners out of 100 marks distributed as 65 marks for dissertation and 35 marks for viva voce . The viva shall be conducted both by internal and external examiners

** Marks obtained in internal assessment papers will be converted in grades as per Table No. 1

The student getting 'D' grade will be declared as 'Fail' in the Dissertation.

17. A student appearing for M.B.A.Semester III & IV Examination will have to pay an additional fee of Rs.500/- for Dissertation in addition to usual Examination fees.
19. Examinees successful at the Semester-I, II & III Examination shall be entitled to receive a Certificate signed by the Registrar, and those successful at the Semester-IV Examination shall on payment of the prescribed fees, receive a Degree in the prescribed form signed by the Vice-Chancellor.

Appendix-A Master of Business Administration Course Semester-I

Subject Code	Name of Subject	Hrs/Week	Credits	Examination Scheme							
				Duration of Exam Hours	External		Internal		Total Max Mark	Min. Agg. Mark	
					Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks			
MBA/101	Principles And Practice of Management	3	4	3	70	35	30	15	100	350	
MBA/102	Managerial Economics	3	4	3	70	35	30	15	100		
MBA/103	Managerial Skill Development	3	4	3	70	35	30	15	100		
MBA/104	Accounting for Managers	3	4	3	70	35	30	15	100		
MBA/105	Organisation Behaviour and Effectiveness	3	4	3	70	35	30	15	100		
MBA/106	Business Ethics	3	4	3	70	35	30	15	100		
MBA/107	Management Information System	3	4	3	70	35	30	15	100		
MBA/108	Quantitative Methods	3	4	—	—	—	Internal Assessment Paper				
Total		24	32						700		350

Appendix-B Master of Business Administration Course Semester- II

Subject Code	Name of Subject	Hrs/Week	Credits	Examination Scheme							
				Duration of Exam Hours	External		Internal		Total Max Mark	Min. Agg. Mark	
					Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks			
MBA/201	Business Environment	3	4	3	70	35	30	15	100	350	
MBA/202	Research Methodology	3	4	3	70	35	30	15	100		
MBA/203	Human Resources Management	3	4	3	70	35	30	15	100		
MBA/204	Financial Management	3	4	3	70	35	30	15	100		
MBA/205	Marketing Management	3	4	3	70	35	30	15	100		
MBA/206	Production and Operations Management	3	4	3	70	35	30	15	100		
MBA/207	Logistics Management	3	4	3	70	35	30	15	100		
MBA/208	Management Science	3	4	—	—	—	Internal Assessment Paper				
Total		24	32						700		350

**Appendix-C
Semester- III**

Subject Code	Name of Subject	Hrs/ Week	Credits	Examination Scheme						Min. Agg. Mark	
				Duration of Exam Hours	External		Internal		Total Max Mark		
					Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks			
MBA/301	Business Law	3	4	3	70	35	30	15	100	350	
MBA/3101/F	Indian Financial System	3	4	3	70	35	30	15	100		
MBA/3102/F	Banking System	3	4	3	70	35	30	15	100		
MBA/3103/F	Working Capital Management	3	4	3	70	35	30	15	100		
MBA/3104/F	International Financial Management	3	4	3	70	35	30	15	100		
MBA/3105/F	Investment Science	3	4	3	70	35	30	15	100		
MBA/3106/F	Risk Management	3	4	3	70	35	30	15	100		
MBA/3201/M	International Business Strategy	3	4	3	70	35	30	15	100		
MBA/3202/M	Sales & Distribution Management	3	4	3	70	35	30	15	100		
MBA/3203/M	Consumer Behavior	3	4	3	70	35	30	15	100		
MBA/3204/M	Advertising Management	3	4	3	70	35	30	15	100		
MBA/3205/M	Brand Management	3	4	3	70	35	30	15	100		
MBA/3206/M	Agriculture Marketing	3	4	3	70	35	30	15	100		
MBA/3301/H	Management of Industrial Relations	3	4	3	70	35	30	15	100		
MBA/3302/H	Human Relations & Legal Framework	3	4	3	70	35	30	15	100		
MBA/3303/H	Compensation Management	3	4	3	70	35	30	15	100		
MBA/3304/H	Human Resource Development	3	4	3	70	35	30	15	100		
MBA/3305/H	Management of Training & Development	3	4	3	70	35	30	15	100		
MBA/3306/H	Performance Management	3	4	3	70	35	30	15	100		
MBA/3401/P	Purchasing And Materials Management	3	4	3	70	35	30	15	100		
MBA/3402/P	Production Planning And Control	3	4	3	70	35	30	15	100		
MBA/3403/P	Ergonomics	3	4	3	70	35	30	15	100		
MBA/3404/P	World Class Manufacturing	3	4	3	70	35	30	15	100		
MBA/3405/P	Principles and Practices of Safety Management	3	4	3	70	35	30	15	100		
MBA/3406/P	Costing for Production	3	4	3	70	35	30	15	100		
MBA/307	Dissertation	3	4	—	—	—	Internal Assessment				
Total		24	32						700		350

**Appendix-D
Semester- IV**

Subject Code	Name of Subject	Hrs/ Week	Credits	Examination Scheme						Min. Agg. Mark	
				Duration of Exam Hours	External		Internal		Total Max Mark		
					Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks			
MBA/401	Strategic Management	3	4	3	70	35	30	15	100	350	
MBA/4101/CGF	Financial Decision Analysis	3	4	3	70	35	30	15	100		
MBA/4102/CGF	Security Analysis And Portfolio Management	3	4	3	70	35	30	15	100		
MBA/4103/CGF	Financial Derivatives	3	4	3	70	35	30	15	100		
MBA/4104/CGF	Management Of Financial Services	3	4	3	70	35	30	15	100		
MBA/4105/CGF	Foreign Exchange Market	3	4	3	70	35	30	15	100		
MBA/4106/CGF	Insurance Management	3	4	3	70	35	30	15	100		
MBA/4201/SM	Sales & Promotion Management	3	4	3	70	35	30	15	100		
MBA/4202/SM	Marketing Of Services	3	4	3	70	35	30	15	100		
MBA/4203/SM	Marketing Of Social Services	3	4	3	70	35	30	15	100		
MBA/4204/SM	Retail Marketing	3	4	3	70	35	30	15	100		
MBA/4205/SM	Rural Marketing	3	4	3	70	35	30	15	100		
MBA/4206/SM	International Marketing	3	4	3	70	35	30	15	100		
MBA/4401/OB	Human Behavior At Work Place	3	4	3	70	35	30	15	100		
MBA/4402/OB	Organization Development	3	4	3	70	35	30	15	100		
MBA/4403/OB	Management Of Group Process	3	4	3	70	35	30	15	100		
MBA/4404/OB	Corporate Leadership Management	3	4	3	70	35	30	15	100		
MBA/4405/OB	Knowledge Management	3	4	3	70	35	30	15	100		
MBA/4406/OB	International HRM	3	4	3	70	35	30	15	100		
MBA/4401/OM	Service Operations Management	3	4	3	70	35	30	15	100		
MBA/4402/OM	Applied Operations Research	3	4	3	70	35	30	15	100		
MBA/4403/OM	Transportation Management	3	4	3	70	35	30	15	100		
MBA/4404/OM	Total Quality Management	3	4	3	70	35	30	15	100		
MBA/4405/OM	Industrial Health And Disaster Management	3	4	3	70	35	30	15	100		
MBA/4406/OM	Project Management	3	4	3	70	35	30	15	100		
MBA/407	Dissertation	3	4	3	—	—	Internal Assessment				
Total		24	32						700		350

4. Keat, Paul G & Philips K.Y.Young, Managerial Economics, Prentice Hall New Jersey 1996.
5. Koutsoyiannis, A Modern Micro Economics. New York, Macmillan, 1991
6. Milgrom, P and Roberts J. Economics Organization and Management Englewood Cliffs, New Jersey Prentice Hall Inc. 1992.
7. Maheshwari, Yogesh. Managerial Economics., P.H.I.
8. Mehta, P.L. Managerial Economics., Sultanchand & Sons.
9. Varshney, R.L. Managerial Economics., Sultanchand & Sons.

MBA/103 Managerial Skills Development

Objective: The course is aimed at equipping the students with the necessary techniques & skills of communication and presentation. It enables in developing confidence among students to perform better as professionals.

Unit-I : Managerial Skills- Nature & Concepts, objectives, significance, Managerial Skills, Employability Skills, Soft Skills and Technical Skills.

Unit-II : Importance & Nature of communication, Verbal and Non Verbal, Talking and Speaking, Communication, Principles of effective communication, Process of communication, Barriers of Communication, Types of Communication.

Unit-III : Do's and Don'ts of Business Writing, Business correspondence, Report Writing, e-communication, Resume Writing, C.V. Writing.

Unit-IV : Listening Skills, Body Language and Public Speaking, Negotiation Skill.

Unit-V : Interview Techniques, Group Discussions, Presentation skills, Meetings, Case Analysis, Brain Storming, Paper Writing and Presentation.

Suggested Readings:

1. Bowman, Joel P and Branchaw, Bemadine "Business Communication from Process to Product. 1987 Dryden Press, Chicago
2. Hatch Richard "Communicating in Business. 1977 Science Research Associates, Chicago

3. Murphy, Herta A and Peck, Charries E "Effective Business Communications". 2nd ed. 1976. Tata McGraw Hill, New Delhi.
4. Pearce. C. Glenn etc. "Business Communications: Principles and Applications.2nd" ed. 1988. John Wiley., New York.

MBA/ 104 Accounting for Managers

Objective:-The basic purpose of this course is to develop an insight of postulates. principles and techniques of accounting and utilization of financial and accounting information for planning decision-making and control.

Unit-I : Financial Accounting- concept, importance & scope. Generally Adopted Accounting Principles. International Financial Reporting Standards

Unit-II : Understanding Financial Statements and Balance Sheet, Measurement of Business Income, Analysis of Financial Statements: Comparative Analytical Techniques (CAT) and Relative Analytical Techniques (RAT)

Unit-III : Depreciation Methods, Inventory Valuation Methods

Unit-IV : Management Accounting Concept, Need, Importance & Scope. Budget & Budgetary control. Performance & zero Based Budgeting

Unit-V : Cost Sheet, Costing for decision making, Relevant Costing. Marginal Costing & Absorption costing.

Suggested Readings:

1. Bhattacharya S.K. and Dearden J. Accounting for Management. Text and cases. New Delhi, Vikas, 1996
2. Heitger L.E. and Matrach Serge, Financial Accounting New York, McGraw Hill, 1990
3. Hingorani N.L. and Ramnathan A.R. Management Accounting 5th ed. New Delhi, Sultan Chand, 1992.
4. Homgren Charles etc Principles of Financial and Management Accounting Englewood Cliffs, New Jersey. Prentice Hall Inc. 1994
5. Vj. Madhu Financial and Management Accounting New Delhi, Anmol Publications 1997

MBA/ 105 Organizational Behavior and Effectiveness

- Unit-I** : Individual Behavior – Personality, Learning, Perception, Attitude & Beliefs
- Unit-II** : Group Behavior – Meaning, Types of Groups, Group Process, Group Dynamics – factors influencing intergroup behavior and managing intergroup behavior
- Unit-III** : Organizational Change – Concept & Need, Change Process, Reasons for Resistance to Change, Measures to Overcome Resistance to Change
- Unit-IV** : Organizational Processes – Organizational Power, Organizational Politics, Empowerment, Conflict
- Unit-V** : Organizational Effectiveness – Creativity and Innovation, Corporate Governance, Management of Gender Issues

Suggested Readings:

1. Kolb, D. etc. Organizational Behaviour: An Experiential Approach. 5th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1991.
2. Mainiero, L.A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.
3. Moore, M D. etc. Inside Organizations: Understanding the Human Dimensions. London, Sage, 1988.
4. Abad, Ahmad. Etc. Developing Effective Organization. New Delhi, Sri Ram Centre for Industrial Relations, 1980.
5. De Nitish. Alternative Designs of Human Organizations. London, Sage, 1988.
6. French, W.H. and Bell, C H. Organisation Development. New Delhi, Prentice Hall of India, 1991.
7. French, W.L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990.
8. Harvey, D F. and Brown, DR. An Experimental Approach to Organization Development. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1990.
9. Huse, F E. and Cummings, T.G. Organization, Development and Change. 3rd ed. New York, West, 1985.

10. Sinha, Dharani, Petc. Consultants and Consulting Styles. New Delhi, Vision, 1982.

MBA/ 106 Business Ethics

Objective: To acquaint the students with ethical values and practices with emphasis on Indian Values and Culture

- Unit I** : Indian Management – Principles, Models & Theory of Karma, Theory and Practices of Holistic Management and its relevance
- Unit II** : Ethics – Meaning, Objectives and Sources of Ethics, Types of Business Ethics, Factors influencing Business Ethics, Ethics V/s Morals and Values
- Unit III** : Managing Ethics – Theories of Ethics, Ethical Dilemma, Codes of Ethics, Normative Ethics in Management, Need and Values of Ethics in Global Change Behavioral Aspects of Ethics and Values
- Unit IV** : Indian Values in Management – Secular and Spiritual Values, Science and Human Values, Lessons from Ancient Indian Educational System
- Unit V** : Stress Management – Stress eustress, distress, Indian Perspective of Stress Management, Reasons for stress at workplace, Coping with a stress

Suggested Readings:

1. Murthy, C.S.V., Business Ethics – Text and Cases, Himalaya Publishing House Pvt. Ltd., 2nd Edition.
2. Wills, Joseph N., Business Ethics – A Stakeholder and Issues Management Approach, South Western Cengage Learning, 2003 Edition
3. Chakraborty, S.K.: Foundations of Managerial Work-Contributions from Indian Thought, Himalaya Publishing House Delhi 1998.
4. Kumar, S and N.K. Uberoi: Managing Secularism in the New Millennium Excel Books 2000
5. Gandhi, M.K. The story of My Experiment with Truth, Navjivan Publishing House, Ahmedabad, 1972.
6. Sharma Suhas, “ Eastern Door Western Windows” , New Age Publications

5. Gupta S.P. Statistical Methods, 30th ed. Sultan Chand, New Delhi, 2001.
6. Golden Biddle, Koren and Karen D. Locke : Composing Qualitative Research Sage Pub. 1997.
7. Salkind, Neil J. Exploring Research 3rd ed. Prentice Hall NJ. 1997

MBA/203 Human Resource Management

Objective: To familiarize the students with human resource management concepts, principles, functions, applications, development and research.

Unit I : HRM Scenario and Acquisition of Human Resources: HRM- the global and Indian Scenario, HRM for corporate excellence, Human resource planning. Human resource information system. Recruitment and selection strategies.

Unit II : Developing Human Resources: HRD-Concept, multiple goals, functions and organizational effectiveness. Performance Appraisal System. Potential Appraisal System and Succession Planning. Career Planning and Development, Assessment and Development Centers, Training and Development.

Unit III : Motivating Human Resources: Motivation at work-concept, objectives, types and applications. Participative Management-Approaches and Applications, Employee Empowerment-concept, nature, objectives, schemes and applications.

Unit IV : Maintenance of Human Resources: Reward System, Quality of Work Life, Organisation Development

Unit V : Human Resources and Knowledge Era: Knowledge Creation and Management, Virtual Organizations and HR Trends, Learning Organizations, Strategic Human Resource Management, International HRM-some Key issues.

Suggested Reading:

- 1) Sarah Gilmore & Steve Williams, Human resource management, Oxford University Press.
- 2) P. Jyothi & D.N.Venkatesh, Human Resource Management, Oxford University Press.

- 3) Biswajeet Pattnayak, Human Resource Management, Prentice Hall of India Pvt. Ltd.,2001
- 4) Dr. K.K.Chaudhari, Human Resource Management: Principles and Practices, Himalaya Publication, 2010.

MBA/204 Financial Management

Objective: The purpose of this course is to acquaint the students with the broad framework of financial decision making in a business unit.

Unit-I : Financial Management-Aims & Objectives, Financial Analysis & control. Cost-Volume Profit Analysis. Operating & Financial Leverage.

Unit-II : Time -value of money, Investment & capital structure Decisions . Optimum Capital structure.

Unit-III : Instruments of Long term and Short term Financing, Cost of different sources of raising capital, Weighted Average cost of capital.

Unit-IV : Valuations Bonds & Stocks, Rates of return, Methods of Capital Budgeting.

Unit-V : Management and Estimation of Working Capital, Internal Financing & Dividend Policy.

Suggested Readings:

1. Archer Stephen H etc. Financial Management. New York, John Wiley 1990
2. Bhalla V.K. : Financial Management and Policy 2nd ed. New Delhi Anmol, 1998
3. Brealey. Richard A and Myers Stewart C. Principles of Corporate Finance 5th ed. New Delhi McGraw Hill 1996
4. Hampton, John Financial Decision Making Englewood Cliffs, New Jersey, Prentice Hall inc. 1997.
5. Van Home James C : Financial Management and Policy 10th ed. New Delhi, Prentice Hall of India- 1997
6. Winger, Bernard and Mohan Nancy. Principles of Financial Management New York, Macmillan Publishing Company, 1991 .
7. Prasanna Chandra, “ Financial Management-Theory and Practice”, Tata McGraw Hill 4th, 5th, 6th, 7th Ed.

6. Seth, D.D. Industrial Dispute Act, 1947. Vol. I & II. Bombay, N. M Tripathi, 1995.
7. Srivastava S C. Industrial Relations and Labour Law. New Delhi, Vikas, 1994.

MBA/3303/H Compensation Management

Objective: To make the students well versed with the principles and practices of Compensating the Human Resource of an organization.

- Unit-I** : Compensation Management: Concept, Components and Theories, Compensation Package, Reward Management.
- Unit-II** : Diagnosis of compensation problem, Meaning and necessity of Benchmarking, commitments, internal & external equity in compensation system.
- Unit-III** : Compensation Packages: Tools in Designing, improving & implementing. Designing Compensations Packages for specific type of human resources
- Unit-IV** : Components of compensation: Fringe Benefits, Incentives, and Retirement Benefits..
- Unit-V** : Strategic Compensation System, compensation practices of public limited, institutional, corporate & public sector companies.

Suggested Readings:

1. Armstrong, Michel and Murlis, Helen. Reward Management: A Handbook of Salary Administration, London, Kegan Paul, 1988.
2. Bergess, Lenard R. Wage and Salary Administration, London, Charles E-Merril, 1984
3. Capeman, George, Employee Share Ownership. New York, Kogan Page, 1991
4. Hart, Robert A. Economics of Non Wage Labour Costs. London, George aller and Unwin, 1984
5. Henderson Richard I. Compensation Management: Rewarding Performance. 6th Edition, Englewood Cliffs, Prentice Hall Inc. 1994
6. Micton, Rock, Handbook of Wage and Salary Administration. 1984

MBA/3304/H Human Resource Development

Objective: To acquaint students with principles, objectives and practices of human resource development in 21st century.

- Unit-I** : HRD-Concept & Goals, Challenges, Climate, Practices in India, Learning and HRD
- Unit-II** : HRD System Design, Assessing HRD Needs, Designing and Implementing HRD Programs, Evaluating HRD Program. Staffing and HRD Function
- Unit-III** : HRD Strategies for Employee: Employee Socialization and Orientation, HRD Intervention
- Unit-IV** : Career Management & Development: Concept, Objectives, Relevance and Process, Career and Succession Planning, Post Retirement Planning.
- Unit-V** : Counseling, Coaching, Mentoring and Performance Management, HRD & Organization Change, HRD & Diversity in work force, HRD Audit and Accounting.

SUGGESTED READINGS:

1. Dayal, Ishwar. Successful Applications of HRD. New Delhi, New Concepts, 1996.
2. Dayal, Ishwar. Designing HRD Systems. New Delhi, Concept, 1993.
3. Kohli, Uddesh & Sinha, Dharni P. HRD- Global Challenges & Strategies in 2000 A.D. New Delhi, ISTD, 1995.
4. Maheshwari, B L. & Sinha, Dharni P. Management of Change Through HRD. New Delhi, Tata McGraw Hill, 1991.
5. Pareek, U etc. Managing Transitions : The HRD Response. New Delhi, Tata McGraw Hill, 1992.
6. Rao, T V. etc. Alternative Approaches & Strategies of Human Resource Development. Jaipur, Rawat, 1988.
7. Silvera, D N. HRD: The Indian Experience. Delhi, New India, 1991.

MBA/3305/H Management of Training and Development

Objective: To familiarize students with training needs, techniques and applications for overall development of employees.

- Unit II** : Rural consumer behavior – buyer characteristics, decision process and behavior patterns, evaluation procedure, brand loyalty, innovation adoption.
- Unit III** : Information System for Rural Marketing – Concepts, Significance, Internal Reporting System, Marketing Research System, Decision Support System. Selecting and Attracting Markets – Concepts and Process, Segmentation, Degrees, Bases, and guides to effective Segmentation, Targeting and Positioning.
- Unit IV** : Product Strategy for rural Markets, Concept and Significance, Product Mix and Product Item Decisions, Competitive Product Strategies. Pricing Strategy in Rural Marketing – Concept, Significance, Objectives, Policy and Strategy.
- Unit V** : Promotion towards rural audience, exploring media, profiling target audience, designing right promotion strategy and campaign, Rural Distribution – Channels, old setup, new players, new approaches, coverage strategy.

Suggested Readings:

1. C.S.G Krishnamacharyulu & Lalitha Ramakrishnan, “Rural Marketing” – Text and Cases, Pearson Education.
2. C.S.G Krishnamacharyulu & Lalitha Ramakrishnan, “Cases in rural marketing and integrated approach”. Pearson education.
3. Robert Chambers, “Rural Development: Putting the last first”, Pearson Education.

MBA/4206/SM International Marketing Environment

- Unit I** : Distinction between International Marketing and Domestic Marketing, Economic Environment of International Marketing, International Institutions – UNCTAD, WTO, Trade Agreement – Free Trade Area, Customs Union, Common Market, Evolution of International Business Theories.
- Unit II** : Overview of India & World Trade – EXIM Policy, Foreign Trade Policy and Regulation, Trading Partners – Bilateral & Multilateral Trade Agreement, International Market Place & Space, Barriers, International Politics & Economic Integration, Trade Blocks.

- Unit III** : Institutional Infrastructure for Export Promotion – Export Promotion Councils (EPC), Public Sector Trading Agencies – ECGC, Commodity Board, Export – Import Management – Registration of Exporters, Procedure & Documents, Export Quotations.
- Unit IV** : Shipping and Transportation, Insurance, Negotiations of Documents, Instruments of Payments – Open Account, Bills of Exchange, Letter of Credit, Export Finance.
- Unit V** : Trade and BOP of India, Technological Developments and International Marketing..

Suggested Readings:

1. International Marketing Mgt. : U.C. Mathur, SAGE
2. International Business: Justin Paul, PHI
3. International Business: K. Aswathappa, TATA McGraw Hill
4. International Marketing : Rakesh Mohan Joshi, Oxford
5. International Marketing: R. Shrinivasan, PHI
6. International Marketing : B.S. Rathore, Himalaya Publishing, J.S. Rathore, BM Jani House

MBA/4301/OB Human Behaviour At Work Place

Objective: To familiarize the students with organizational behaviour-concepts, components, theories and applications.

Unit I: Organizational Behaviour: Definition, Objectives, Key Elements and nature. Organizational Behaviour Process, models, Organizational Behaviour systems and its elements. Overview of evolution of Organizational Behaviour. Contributing disciplines to Organizational Behaviour. Organizational Behaviour: An Individual Perspective- Individual and Individual Difference, Human Behaviour and its causation, models of man, whole person approach including physical, psychological, mental, emotional and spiritual level.

Unit II : An overview of Organizational Behaviour focusing at individual level: Intelligence, Emotions and moods, abilities, competencies and skills, personality, perception, attitudes, values, motivation and learning.

Personality: concepts, Theories and determinants, applications in Organizational Behaviour. Perception: Definition, Difference between perception and sensation, factors affecting perception, improving perceptions and applications in Organizational Behaviour. Attitudes and Values: Attitudes- concepts, formation, types, measurement and attitude change. Overview of values and its application in Organizational Behaviour

Unit III : Job Satisfaction, Organizational commitment and loyalty: Overview, Concept and Applications in Organizational Behaviour Emotions and moods-types, sources and theories with applications in Organizational Behaviour. Emotional Intelligence, Transactional Analysis. Overview of Motivation and Morale in Organizational Behaviour, Overview of Group Dynamics- Meaning, Types of Groups & Group Processes.

Unit IV : Learning and Learning Behaviour: Learning- Meaning, Definition, Principles and concept of reinforcement, punishment. Learning Behaviour-Concept, Models and its applications. Conflict and Conflict Resolution-Definition, sources, types, aspects of conflicts. Conflict resolution and management, overview of negotiation and negotiation strategies, Counseling, Participative management.

Unit V : Organizational Behaviour at Organizational level: Organizational culture and climate-Organizational culture its definition, types, functions, managing culture. Creating, sustaining and changing culture. Organizational Climate- Concept, Dimensions, Determinants and comparison with organizational culture. Quality of Work life- Concept, Meaning and Applications.

Suggested Readings:

1. Kolb, D. etc. Organizational Behaviour: An Experiential Approach. 5th ed. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1991.
2. Mainiero, L.A & Tromley C.L. Developing Managerial Skills in OB. New Delhi, Prentice Hall of India, 1985.
3. Moore, M D. etc. Inside Organizations: Understanding the Human Dimensions. London, Sage, 1988.

4. Abad, Ahmad. Etc. Developing Effective Organization. New Delhi, Sri Ram Centre for Industrial Relations, 1980.
5. De Nitish. Alternative Designs of Human Organizations. London, Sage, 1988.
6. French, W.H. and Bell, C.H. Organisation Development. New Delhi, Prentice Hall of India, 1991.
7. French, W.L., etc. Organization Development Theory, Practice and Research. 3rd ed. New Delhi, Universal Book Stall, 1990.
8. Harvey, D.F. and Brown, D.R. An Experimental Approach to Organization Development. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1990.
9. Huse, F.E. and Cummings, T.G. Organization, Development and Change. 3rd ed. New York, West, 1985.
10. Sinha, Dharani, P.etc. Consultants and Consulting Styles. New Delhi, Vision, 1982.

MBA/4302/OB **Organizational Development and Intervention Strategies**

Unit-I : Organization Development: Concept and Theory of Development, Approaches to Problem Diagnosis.

Unit-II : Organizational Development Techniques: Steps in OD, General OD Competencies, OD Skills.

Unit-III : OD Evaluation: Evaluation of OD, Ethics of OD Professional, Future of OD. Organizational Effectiveness-concept, objectives, nature and need.

Unit-IV : Organizational Change: Concept, Objectives, Nature, Types, Models and Implementation. Change Strategies. Change Agent.

Unit-V : Organizational Interventions: Major OD Intervention Techniques, Designing Interventions, Interpersonal Interventions, Team Interventions, Inter-group Interventions.

Suggested Readings:

1. Theory of OD & Change; Cummings/Worley Cengage Learning
2. Od Behavior Science, Intervention for Org. Improvement; Wendell L.French (ecil H. Bell Jr.), PHI