

<b>B. E. CIVIL ENGINEERING</b>			
<b>Choice Based Credit System (CBCS) and Outcome Based Education (OBE)</b>			
<b>SEMESTER - VII</b>			
<b>QUANTITY SURVEYING AND CONTRACT MANAGEMENT</b>			
Course Code	<b>18CV71</b>	CIE Marks	40
Teaching Hours/Week(L:T:P)	(3:0:0)	SEE Marks	60
Credits	03	Exam Hours	03
<p><b>Course Learning Objectives:</b> This course will enable students to;</p> <ol style="list-style-type: none"> <li>1. Estimate the quantities of work, develop the bill of quantities and arrive at the Cost of civil engineering Project</li> <li>2. Understand and apply the concept of Valuation for Properties</li> <li>3. Understand, Apply and Create the Tender and Contract document.</li> </ol>			
<b>Module -1</b>			
<p><b>Quantity Estimation for Building:</b> study of various drawing attached with estimates, important terms, units of measurements, abstract, Types of estimates. Estimation of building by Short wall and long wall method - centre line method. Estimate of R.C.C structures including Slab, beam, column, footings.</p>			
<b>Module -2</b>			
<p>Estimate of Steel truss, manhole and septic tanks and slab culvert. <b>Quantity Estimation for Roads:</b> Computation of volume of earthwork fully in banking, cutting, partly cutting and partly Filling by mid-section, trapezoidal and Prismoidal Methods.</p>			
<b>Module -3</b>			
<p><b>Specification for Civil Engineering Works:</b> Objective of writing specifications essentials in specifications, general and detail specifications of different items of works in buildings and roads. <b>Analysis of Rates :</b> Factors Affecting Cost of Civil Works , Concept of Direct Cost , Indirect Cost and Project Cost Rate analysis and preparation of bills, Data analysis of rates for various items of Works, Sub-structure components, Rate analysis for R.C.C. slabs, columns and beams.</p>			
<b>Module-4</b>			
<p><b>Contract Management-Tender and its Process:</b> Invitation to tender, Prequalification, administrative approval &amp; Technical sanction. Bid submission and Evaluation process. Contract Formulation: Letter of intent, Award of contract, letter of acceptance and notice to proceed. Features / elements of standard Tender document (source: PWD / CPWD / International Competitive Bidding – NHAI / NHEPC / NPC). Law of Contract as per Indian Contract act 1872, Types of Contract, Joint venture. <b>Contract Forms:</b> FIDIC contract Forms, CPWD, NHAI, NTPC, NHEPC.</p>			
<b>Module -5</b>			
<p><b>Contract Management-Post award :</b>Basic understanding on definitions, Performance security, Mobilization and equipment advances, Secured Advance, Suspension of work, Time limit for completion, Liquidated damages and bonus, measurement and payment, additions and alterations or variations and deviations, breach of contract, Escalation, settlement of account or final payment, claims, Delay's and Compensation, <b>Disputes &amp; its resolution mechanism</b>, Contract management and administration. <b>Valuation:</b> Definitions of terms used in valuation process, Purpose of valuation, Cost, Estimate, Value and its relationship, Capitalized value. Freehold and lease hold and easement, Sinking fund, depreciation–methods of estimating depreciation, Outgoings, Process and methods of valuation: Rent fixation, valuation for mortgage, valuation of land.</p>			
<p><b>Course outcomes:</b> After studying this course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Taking out quantities and work out the cost and preparation of abstract for the estimated cost for various civil engineering works.</li> <li>2. Prepare detailed and abstract estimates for various road works, structural works and water supply and sanitary works.</li> <li>3. Prepare the specifications and analyze the rates for various items of work.</li> <li>4. Assess contract and tender documents for various construction works.</li> <li>5. Prepare valuation reports of buildings.</li> </ol>			
<b>Question paper pattern:</b>			
<ul style="list-style-type: none"> <li>• The question paper will have ten full questions carrying equal marks.</li> </ul>			

SOFTWARE ENGINEERING (Effective from the academic year 2018 -2019) SEMESTER – III			
Course Code	18CS35	CIE Marks	40
Number of Contact Hours/Week	3:0:0	SEE Marks	60
Total Number of Contact Hours	40	Exam Hours	03
CREDITS –3			
<b>Course Learning Objectives:</b> This course (18CS35) will enable students to:			
<ul style="list-style-type: none"> <li>Outline software engineering principles and activities involved in building large software programs. Identify ethical and professional issues and explain why they are of concern to software engineers.</li> <li>Explain the fundamentals of object oriented concepts</li> <li>Describe the process of requirements gathering, requirements classification, requirements specification and requirements validation. Differentiate system models, use UML diagrams and apply design patterns.</li> <li>Discuss the distinctions between validation testing and defect testing.</li> <li>Recognize the importance of software maintenance and describe the intricacies involved in software evolution. Apply estimation techniques, schedule project activities and compute pricing.</li> <li>Identify software quality parameters and quantify software using measurements and metrics. List software quality standards and outline the practices involved.</li> </ul>			
Module 1			Contact Hours
<b>Introduction:</b> Software Crisis, Need for Software Engineering. Professional Software Development, Software Engineering Ethics. Case Studies. <b>Software Processes:</b> Models: Waterfall Model (Sec 2.1.1), Incremental Model (Sec 2.1.2) and Spiral Model (Sec 2.1.3). Process activities. <b>Requirements Engineering:</b> Requirements Engineering Processes (Chap 4). Requirements Elicitation and Analysis (Sec 4.5). Functional and non-functional requirements (Sec 4.1). The software Requirements Document (Sec 4.2). Requirements Specification (Sec 4.3). Requirements validation (Sec 4.6). Requirements Management (Sec 4.7). <b>RBT: L1, L2, L3</b>			08
Module 2			
What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development; OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. <b>Introduction, Modelling Concepts and Class Modelling:</b> What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development; OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. Class Modelling: Object and Class Concept; Link and associations concepts; Generalization and Inheritance; A sample class model; Navigation of class models; <b>Textbook 2: Ch 1,2,3.</b> <b>RBT: L1, L2 L3</b>			08
Module 3			
<b>System Models:</b> Context models (Sec 5.1). Interaction models (Sec 5.2). Structural models (Sec 5.3). Behavioral models (Sec 5.4). Model-driven engineering (Sec 5.5). <b>Design and Implementation:</b> Introduction to RUP (Sec 2.4), Design Principles (Chap 7). Object-oriented design using the UML (Sec 7.1). Design patterns (Sec 7.2). Implementation issues (Sec 7.3). Open source development (Sec 7.4). <b>RBT: L1, L2, L3</b>			08

<b>Module 4</b>	
<p><b>Software Testing:</b> Development testing (<b>Sec 8.1</b>), Test-driven development (<b>Sec 8.2</b>), Release testing (<b>Sec 8.3</b>), User testing (<b>Sec 8.4</b>). Test Automation (<b>Page no 212</b>).</p> <p><b>Software Evolution:</b> Evolution processes (<b>Sec 9.1</b>). Program evolution dynamics (<b>Sec 9.2</b>). Software maintenance (<b>Sec 9.3</b>). Legacy system management (<b>Sec 9.4</b>).</p> <p><b>RBT: L1, L2, L3</b></p>	08
<b>Module 5</b>	
<p><b>Project Planning:</b> Software pricing (<b>Sec 23.1</b>). Plan-driven development (<b>Sec 23.2</b>). Project scheduling (<b>Sec 23.3</b>): Estimation techniques (<b>Sec 23.5</b>). <b>Quality management:</b> Software quality (<b>Sec 24.1</b>). Reviews and inspections (<b>Sec 24.3</b>). Software measurement and metrics (<b>Sec 24.4</b>). Software standards (<b>Sec 24.2</b>)</p> <p><b>RBT: L1, L2, L3</b></p>	08
<b>Course Outcomes:</b> The student will be able to :	
<ul style="list-style-type: none"> <li>• Design a software system, component, or process to meet desired needs within realistic constraints.</li> <li>• Assess professional and ethical responsibility</li> <li>• Function on multi-disciplinary teams</li> <li>• Use the techniques, skills, and modern engineering tools necessary for engineering practice</li> <li>• Analyze, design, implement, verify, validate, implement, apply, and maintain software systems or parts of software systems</li> </ul>	
<b>Question Paper Pattern:</b>	
<ul style="list-style-type: none"> <li>• The question paper will have ten questions.</li> <li>• Each full Question consisting of 20 marks</li> <li>• There will be 2 full questions (with a maximum of four sub questions) from each module.</li> <li>• Each full question will have sub questions covering all the topics under a module.</li> <li>• The students will have to answer 5 full questions, selecting one full question from each module.</li> </ul>	
<b>Textbooks:</b>	
<ol style="list-style-type: none"> <li>1. Ian Sommerville: Software Engineering, 9th Edition, Pearson Education, 2012. (Listed topics only from Chapters 1,2,3,4, 5, 7, 8, 9, 23, and 24)</li> <li>2. Michael Blaha, James Rumbaugh: Object Oriented Modelling and Design with UML,2<sup>nd</sup> Edition, Pearson Education,2005.</li> </ol>	
<b>Reference Books:</b>	
<ol style="list-style-type: none"> <li>1. Roger S. Pressman: Software Engineering-A Practitioners approach, 7th Edition, Tata McGraw Hill.</li> <li>2. Pankaj Jalote: An Integrated Approach to Software Engineering, Wiley India</li> </ol>	

<b>B. E. Common to all Programmes</b>			
<b>Outcome Based Education (OBE) and Choice Based Credit System (CBCS)</b>			
<b>SEMESTER - III</b>			
<b>CONSTITUTION OF INDIA, PROFESSIONAL ETHICS AND CYBER LAW (CPC)</b>			
Course Code	<b>18CPC39/49</b>	CIE Marks	40
Teaching Hours/Week (L:T:P)	(1:0:0)	SEE Marks	60
Credits	01	Exam Hours	02
<b>Course Learning Objectives: To</b>			
<ul style="list-style-type: none"> <li>• know the fundamental political codes, structure, procedures, powers, and duties of Indian government institutions, fundamental rights, directive principles, and the duties of citizens</li> <li>• Understand engineering ethics and their responsibilities; identify their individual roles and ethical responsibilities towards society.</li> <li>• Know about the cybercrimes and cyber laws for cyber safety measures.</li> </ul>			
<b>Module-1</b>			
<b>Introduction to Indian Constitution:</b>			
The Necessity of the Constitution, The Societies before and after the Constitution adoption. Introduction to the Indian constitution, The Making of the Constitution, The Role of the Constituent Assembly - Preamble and Salient features of the Constitution of India. Fundamental Rights and its Restriction and limitations in different Complex Situations. Directive Principles of State Policy (DPSP) and its present relevance in our society with examples. Fundamental Duties and its Scope and significance in Nation building.			
<b>Module-2</b>			
<b>Union Executive and State Executive:</b>			
Parliamentary System, Federal System, Centre-State Relations. Union Executive – President, Prime Minister, Union Cabinet, Parliament - LS and RS, Parliamentary Committees, Important Parliamentary Terminologies. Supreme Court of India, Judicial Reviews and Judicial Activism. State Executives – Governor, Chief Minister, State Cabinet, State Legislature, High Court and Subordinate Courts, Special Provisions (Articles 370,371,371J) for some States.			
<b>Module-3</b>			
<b>Elections, Amendments and Emergency Provisions:</b>			
Elections, Electoral Process, and Election Commission of India, Election Laws. Amendments - Methods in Constitutional Amendments (How and Why) and Important Constitutional Amendments. Amendments – 7,9,10,12,42,44, 61, 73,74, 75, 86, and 91,94,95,100,101,118 and some important Case Studies. Emergency Provisions, types of Emergencies and its consequences.			
<b>Constitutional special provisions:</b>			
Special Provisions for SC and ST, OBC, Women, Children and Backward Classes.			
<b>Module-4</b>			
<b>Professional / Engineering Ethics:</b>			
Scope & Aims of Engineering & Professional Ethics - Business Ethics, Corporate Ethics, Personal Ethics. Engineering and Professionalism, Positive and Negative Faces of Engineering Ethics, Code of Ethics as defined in the website of Institution of Engineers (India): Profession, Professionalism, and Professional Responsibility. Clash of Ethics, Conflicts of Interest. Responsibilities in Engineering Responsibilities in Engineering and Engineering Standards, the impediments to Responsibility. Trust and Reliability in Engineering, IPRs (Intellectual Property Rights), Risks, Safety and liability in Engineering			
<b>Module-5</b>			
<b>Internet Laws, Cyber Crimes and Cyber Laws:</b>			
Internet and Need for Cyber Laws, Modes of Regulation of Internet, Types of cyber terror capability, Net neutrality, Types of Cyber Crimes, India and cyber law, Cyber Crimes and the information Technology Act 2000, Internet Censorship. Cybercrimes and enforcement agencies.			

<b>Course Outcomes:</b> On completion of this course, students will be able to, CO 1: Have constitutional knowledge and legal literacy. CO 2: Understand Engineering and Professional ethics and responsibilities of Engineers. CO 3: Understand the the cybercrimes and cyber laws for cyber safety measures.				
<b>Question paper pattern for SEE and CIE:</b>				
<ul style="list-style-type: none"> <li>The SEE question paper will be set for 100 marks and the marks scored by the students will proportionately be reduced to 60. The pattern of the question paper will be objective type (MCQ).</li> <li>For the award of 40 CIE marks, refer the University regulations 2018.</li> </ul>				
Sl. No.	Title of the Book	Name of the Author/s	Name of the Publisher	Edition and Year
<b>Textbook/s</b>				
1	Constitution of India, Professional Ethics and Human Rights	Shubham Singles, Charles E. Haries, and et al	Cengage Learning India	2018
2	Cyber Security and Cyber Laws	Alfred Basta and et al	Cengage Learning India	2018
<b>Reference Books</b>				
3	Introduction to the Constitution of India	Durga Das Basu	Prentice –Hall,	2008.
4	Engineering Ethics	M. Govindarajan, S. Natarajan, V. S. Senthilkumar	Prentice –Hall,	2004

<b>MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY</b> (Effective from the academic year 2018 -2019) <b>SEMESTER – V</b>			
<b>Course Code</b>	<b>18CS51</b>	<b>CIE Marks</b>	40
<b>Number of Contact Hours/Week</b>	2:2:0	<b>SEE Marks</b>	60
<b>Total Number of Contact Hours</b>	40	<b>Exam Hours</b>	03
<b>CREDITS – 03</b>			
<b>Course Learning Objectives:</b> This course (18CS51) will enable students to:			
<ul style="list-style-type: none"> <li>• Explain the principles of management, organization and entrepreneur.</li> <li>• Discuss on planning, staffing, ERP and their importance</li> <li>• Infer the importance of intellectual property rights and relate the institutional support</li> </ul>			
<b>Module – 1</b>			<b>Contact Hours</b>
<b>Introduction</b> - Meaning, nature and characteristics of management, scope and Functional areas of management, goals of management, levels of management, brief overview of evolution of management theories,. Planning- Nature, importance, types of plans, steps in planning, Organizing- nature and purpose, types of Organization, Staffing- meaning, process of recruitment and selection <b>RBT: L1, L2</b>			08
<b>Module – 2</b>			
<b>Directing and controlling-</b> meaning and nature of directing, leadership styles, motivation Theories, Communication- Meaning and importance, Coordination- meaning and importance, Controlling- meaning, steps in controlling, methods of establishing control. <b>RBT: L1, L2</b>			08
<b>Module – 3</b>			
<b>Entrepreneur</b> – meaning of entrepreneur, characteristics of entrepreneurs, classification and types of entrepreneurs, various stages in entrepreneurial process, role of entrepreneurs in economic development, entrepreneurship in India and barriers to entrepreneurship. Identification of business opportunities, market feasibility study, technical feasibility study, financial feasibility study and social feasibility study. <b>RBT: L1, L2</b>			08
<b>Module – 4</b>			
<b>Preparation of project and ERP</b> - meaning of project, project identification, project selection, project report, need and significance of project report, contents, formulation, guidelines by planning commission for project report, <b>Enterprise Resource Planning: Meaning and Importance-</b> ERP and Functional areas of Management – Marketing / Sales- Supply Chain Management – Finance and Accounting – Human Resources – Types of reports and methods of report generation <b>RBT: L1, L2</b>			08
<b>Module – 5</b>			
<b>Micro and Small Enterprises:</b> Definition of micro and small enterprises, characteristics and advantages of micro and small enterprises, steps in establishing micro and small enterprises, Government of India industrial policy 2007 on micro and small enterprises, case study (Microsoft), Case study(Captain G R Gopinath),case study (N R Narayana Murthy & Infosys), <b>Institutional support:</b> MSME-DI, NSIC, SIDBI, KIADB, KSSIDC, TECSOK, KSFC, DIC and District level single window agency, <b>Introduction to IPR.</b>			08

<b>RBT: L1, L2</b>	
<b>Course outcomes:</b> The students should be able to:	
<ul style="list-style-type: none"> <li>• Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship</li> <li>• Utilize the resources available effectively through ERP</li> <li>• Make use of IPRs and institutional support in entrepreneurship</li> </ul>	
<b>Question Paper Pattern:</b>	
<ul style="list-style-type: none"> <li>• The question paper will have ten questions.</li> <li>• Each full Question consisting of 20 marks</li> <li>• There will be 2 full questions (with a maximum of four sub questions) from each module.</li> <li>• Each full question will have sub questions covering all the topics under a module.</li> <li>• The students will have to answer 5 full questions, selecting one full question from each module.</li> </ul>	
<b>Textbooks:</b>	
<ol style="list-style-type: none"> <li>1. Principles of Management -P. C. Tripathi, P. N. Reddy; Tata McGraw Hill, 4th / 6<sup>th</sup> Edition, 2010.</li> <li>2. Dynamics of Entrepreneurial Development &amp; Management -Vasant Desai Himalaya Publishing House.</li> <li>3. Entrepreneurship Development -Small Business Enterprises -Poornima M Charantimath Pearson Education – 2006.</li> <li>4. Management and Entrepreneurship - Kanishka Bedi- Oxford University Press-2017</li> </ol>	
<b>Reference Books:</b>	
<ol style="list-style-type: none"> <li>1. Management Fundamentals -Concepts, Application, Skill Development Robert Lusier – Thomson.</li> <li>2. Entrepreneurship Development -S S Khanka -S Chand &amp; Co.</li> <li>3. Management -Stephen Robbins -Pearson Education /PHI -17th Edition, 2003</li> </ol>	

## V SEMESTER DETAILED SYLLABUS

### B. E. ELECTRICAL AND ELECTRONICS ENGINEERING Choice Based Credit System (CBCS) and Outcome Based Education (OBE) SEMESTER - V

#### MANAGEMENT AND ENTREPRENEURSHIP

Course Code	18EE51	CIE Marks	40
Number of Lecture Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03

#### Course Learning Objectives:

- To introduce the field of management, task of the manager, importance of planning and types of planning, staff recruitment and selection process.
- To discuss the ways in which work is allocation, structure of organizations, modes of communication and importance of managerial control in business.
- To explain need of coordination between the manager and staff, the social responsibility of business and leadership.
- To explain the role and importance of the entrepreneur in economic development and the concept of entrepreneurship.
- To explain various types of entrepreneurs and their functions, the myths of entrepreneurship and the factors required for capacity building for entrepreneurs
- To discuss the importance of Small Scale Industries and the related terms and problems involved.
- To discuss methods for generating new business ideas and business opportunities in India and the importance of business plan.
- To introduce the concepts of project management and discuss capital building process.
- To explain project feasibility study and project appraisal and discuss project financing
- To discuss about different institutions at state and central levels supporting business enterprises. ■

#### Module-1

**Management:** Definition, Importance – Nature and Characteristics of Management, Management Functions, Roles of Manager, Levels of Management, Managerial Skills, Management & Administration, Management as a Science, Art & Profession.

**Planning:** Nature, Importance and Purpose Of Planning, Types of Plans, Steps in Planning, Limitations of Planning, Decision Making – Meaning, Types of Decisions- Steps in Decision Making. ■

#### Module-2

**Organizing and Staffing:** Meaning, Nature and Characteristics of Organization – Process of Organization, Principles of Organization, Departmentalization, Committees – meaning, Types of Committees, Centralization Versus Decentralization of Authority and Responsibility, Span of Control (Definition only), Nature and Importance of Staffing, Process of Selection and Recruitment.

**Directing and Controlling:** Meaning and Nature of Directing-Leadership Styles, Motivation Theories Communication – Meaning and Importance, Coordination- Meaning and Importance, Techniques of Coordination. Controlling – Meaning, Steps in Controlling. ■

#### Module-3

**Social Responsibilities of Business:** Meaning of Social Responsibility, Social Responsibilities of Business towards Different Groups, Social Audit, Business Ethics and Corporate Governance. **Entrepreneurship:** Definition of Entrepreneur, Importance of Entrepreneurship, concepts of Entrepreneurship, Characteristics of successful Entrepreneur, Classification of Entrepreneurs, Intrapreneur – An Emerging Class, Comparison between Entrepreneur and Intrapreneur, Myths of Entrepreneurship, Entrepreneurial Development models, Entrepreneurial development cycle, Problems faced by Entrepreneurs and capacity building for

#### Module-4

**Modern Small Business Enterprises:** Role of Small Scale Industries, Concepts and definitions of SSI Enterprises, Government policy and development of the Small Scale sector in India, Growth and Performance of Small Scale Industries in India, Sickness in SSI sector, Problems for Small Scale Industries, Impact of Globalization on SSI, Impact of WTO/GATT on SSIs, Ancillary Industry and Tiny Industry (Definition only).

**Institutional Support for Business Enterprises:** Introduction, Policies & Schemes of Central-Level Institutions, State-Level Institutions. ■

#### Module-5



**Project Management:** Meaning of Project, Project Objectives & Characteristics, Project Identification-Meaning & Importance; Project Life Cycle, Project Scheduling, Capital Budgeting, Generating an Investment Project Proposal, Project Report-Need and Significance of Report, Contents, Formulation, Project Analysis-Market, Technical, Financial, Economic, Ecological, Project Evaluation and Selection, Project Financing, Project Implementation Phase, Human & Administrative aspects of Project Management, Prerequisites for Successful Project Implementation.

New Control Techniques- PERT and CPM, Steps involved in developing the network, Uses and Limitations of PERT and CPM . ■

**Course Outcomes:** At the end of the course the student will be able to:

- Explain the field of management, task of the manager, planning and steps in decision making.
- Discuss the structure of organization, importance of staffing, leadership styles, modes of communication, techniques of coordination and importance of managerial control in business.
- Explain the concepts of entrepreneurship and a businessman’s social responsibilities towards different groups.
- Show an understanding of role of SSI’s in the development of country and state/central level institutions/agencies supporting business enterprises.
- Discuss the concepts of project management, capital budgeting, project feasibility studies, need for project report and new control techniques. ■

**Question paper pattern:**

- The question paper will have ten questions.
- Each full question is for 20 marks.
- There will be 2 full questions (with a maximum of three sub questions in one full question) from each module.
- Each full question with sub questions will cover the contents under a module.
- Students will have to answer 5 full questions, selecting one full question from each module. ■

**Text Books**

1	Principles of Management	P.C.Tripathi, P.N.Reddy	McGraw Hill,	6 <sup>th</sup> Edition, 2017
2	Entrepreneurship Development And Small Business Enterprises	Poornima M.Charanthimath	Pearson	2 <sup>nd</sup> Edition,2014

**Reference Books**

1	Dynamics of Entrepreneurial Development and Management	Vasant Desai	Himalaya Publishing House	2007
2	Essentials of Management: An International, Innovation and Leadership	Harold Koontz, Heinz Weihrich	McGraw Hill	10 <sup>th</sup> Edition 2016

<b>MANAGEMENT &amp; ORGANIZATIONAL BEHAVIOUR</b>			
Course Code	20MBA11	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to recite the theories and models of Management and Organisational Behavior.</li> <li>2. The student will be able to apply and solve the workplace problems.</li> <li>3. The student will be able to classify in differentiating between the best methods to solve the problem.</li> <li>4. The student will be able to compare the appropriate framework for solving the problems at the workplace</li> <li>5. The student will be able to design model in dealing with the problems in the organisation.</li> </ol>			
<b>Module-1 Introduction to Management</b>			<b>9 hours</b>
<b>Management</b> -Introduction, Meaning, Nature, Objectives, Importance, Difference between Administration and Management, Levels of Management, Types of Managers, Managerial Skills, Managerial Competencies, Scope of Management, Functions of Management, Evolution of Management Thought, Fayol's fourteen principles of Management, Recent Trends in Management.			
<b>Module -2 Functions of Management</b>			<b>10 hours</b>
<b>Planning-</b> Definition, Features, Nature, Importance, Types, Steps in Planning, Planning Tools and Techniques, Essentials of a Good Plan. <b>Organisation-</b> Definitions, Importance, Principles, Types of Organisation Structures, Span of Control, Centralisation and Decentralisation of Authority. <b>Directing-</b> Definitions, Importance, Elements of Directing, Principles of Directing, Characteristics of Directing; <b>Controlling-</b> Definitions, Need of Controlling, Characteristics of Control, Steps in the Controlling Process, Resistance to Control, Design of Effective Control System, Types of Control, Control Techniques. <b>Decision-making-</b> Concepts, Types, Models, Difficulties in Decision-making, Decision-making for Organisational Effectiveness, Decision-making Styles.			
<b>Module -3 Organisational Behaviour</b>			<b>10 hours</b>
<b>Organisational Behaviour:</b> Introduction, Definitions, Nature, Goals, Importance, Approaches to Organisational Behaviour, Models. <b>Attitude-</b> Meaning, Definition, Types, Components, Attitudes and Behaviour, <b>Changing Attitudes in the Workplace;</b> <b>Perception-</b> Perception, Perceptual Process, Factors Influencing Perception, Perception and Decision-making; <b>Personality-</b> Definitions, Factors Influencing Personality, Big Five Personality Traits, Myers-Briggs Type Indicator (MBTI), Personality Tools and Tests; <b>Motivation-</b> Definitions, Process of Motivation (Cycle of Motivation), Nature, Importance, Types, Theories.			
<b>Module -4 Managing Human at Work</b>			<b>7 hours</b>
<b>Group Dynamics-</b> Meaning of Group, Group Characteristics, Classification of Groups, Models of Group Development, Meaning of Group Dynamics, Group Behaviour, <b>Impact of Group on Individual's Behaviour, Impact of External Factors on Group Behaviour.</b> <b>Teamwork-</b> Nature of Teams, Team Characteristics, Teams Versus Groups, <b>Teamwork,</b> Processes of Teamwork, Types of Teams, <b>Reasons for Team Failure, Creating Effective Teams.</b>			
<b>Module-5 Organizational Power, Politics and Culture</b>			<b>7 hours</b>
<b>Power and Politics-</b> Nature of Power and Politics, Early Voices, <b>Questioning Power and Authority, Sources of Power for Individuals, Managing Organisational Politics.</b> <b>Culture-</b> Definitions of Organisational Culture, Strong Versus Weak Culture, Characteristics, Types, Levels, Dimensions, Creating Organisational Culture, Changing Organisational Culture.			
<b>Module - 6 Change and Stress Management</b>			<b>7 hours</b>
<b>Change-</b> Nature, Characteristics, Process, Forces Responsible for Change in Organizations, Resistance to Change, Managing Resistance to Change. <b>Stress Management-</b> Definitions, Understanding Stress, Relation between Stress and Performance, Level, Signs and Symptoms of Stress, Types of Stress, Causes of Stress, Managing Stress.			
<b>Course Outcomes:</b>			
<ol style="list-style-type: none"> <li>1. Gain practical experience in the field of Management and Organization Behaviour</li> <li>2. Acquire the conceptual knowledge of Management, various functions of Management and theories in Organizational Behaviour.</li> <li>3. Apply managerial and behaviour knowledge in real world situations.</li> <li>4. Develop a greater understanding about Management and Behavioural aspects to analyse the concepts related to individual behavior, attitude, perception and personality.</li> <li>5. Understand and demonstrate their exposure on recent trends in management.</li> </ol>			

## II SEMESTER

<b>HUMAN RESOURCE MANAGEMENT</b>			
Course Code	20MBA21	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to recite the theories and various functions of Human Resources Management</li> <li>2. The student will be able to describe and explain in her/his own words, the relevance and importance of Human Resources Management at workplace</li> <li>3. The student will be able to apply and solve the workplace problems through Human Resources Management intervention</li> <li>4. The student will be able to classify and categorise in differentiating between the best method to solve the problem</li> <li>5. The student will be able to compare and contrast different approaches of HRM for solving the complex issues and problems at the workplace</li> <li>6. The student will be able to design and develop an original framework and model in dealing with the problems in the organization.</li> </ol>			
<b>Module-1 Introduction</b>			<b>7 hours</b>
Human Resource Management and Personnel Management, The Importance of Human Resource Management, Models of Human Resource Management, Evolution of Human Resource Management, HRM in India, The Factors Influencing Human Resource Management , Human Resource Management and Line Managers, The HR Competencies, Human Resource Management and Firm Performance.			
<b>Module -2 Human Resource Planning</b>			<b>9 hours</b>
Importance of HR Planning, Manpower Planning to HR Planning, Factors Affecting HR Planning, Benefits of HR Planning, HRP Process, Tools for Demand Forecasting, Attributes of an Effective HR Planning, Barriers to HR Planning, The Challenges for HR, Process of Job Analysis and Job Evaluation.			
<b>Recruitment and Selection:</b> Importance of Recruitment, Recruitment Policies, Factors Influencing Recruitment, Recruitment Process, Sources, Evaluation of Recruitment Process, Recruitment Strategy ; Selection, Future Trends in Recruitment; Selection Process; Selection Tests; Factors Influencing Selections, Challenges in Selection, Application Tracking System using MS-Excel			
<b>Learning, Training, and Development:</b> Training, Learning and Development, Learning Theories, The Future of Training, Learning, and Development: Crystal Gazing into the Future, World of Learning. Process of training and Techniques of Training			
<b>Module -3 Performance Management and Appraisal</b>			<b>9 hours</b>
Objectives of Performance Management, Performance Management and Performance Appraisal, Common Problems with Performance Appraisals, Performance Management Process, Types of Performance Rating Systems, Future of Performance Management.			
<b>Compensation and Benefits</b>			
Introduction, Definitions, Total Compensation, Total Rewards System, Forms of Pay, Theories of Compensation, External Factors, Internal Factors, Establishing Pay Rates, Employee Benefits.			
<b>Industrial Relations</b>			
Decent Workplace: International Labor Organisation, Industrial Relations, The Objectives of Industrial Relations, Approaches of Industrial Relations Systems, The Actors in Industrial Relations, Indian Context, Industrial Relations and Human Resource Management.			
<b>Employment Relations</b> - The Definition, Traditional Employment Relations, Actors in the Fray: Role-taking, The New Frameworks for Employment Relations, The Future of Employee Relations.			
<b>Module -4 Human Resource Management in Small and Medium Enterprises</b>			<b>9 hours</b>
Definition of SMEs, Human Resource Management and Performance in SMEs, The Difference in Adoption of Human Resource Management: SMEs and Large Firms, Indian Experience, Impact of Weak Adoption of Human Resource Management in SMEs, Factors Influencing the Adoption of Human Resource Management Practices in SMEs, Future of Human Resource. Management in SMEs.			
<b>Human Resource Management in the Service Sector</b>			
Introduction, The Emergence of the Services Sector, Implications for Human Resource, Management Function, Differences Between Services Sector and the Manufacturing Sector, Difference in Human Resource Management			

Practices in Services and Manufacturing Sectors, Human Resource Management and Service Quality Correlation, Some Specific Industries in Services Sector, Trade Unions in Services Sector, Models of Union Strategies.

Case Study on “Training Program at ABC Cement” .

**Module -5 Human Resource Management Innovations** **9 hours**

Introduction, Human Resource Management and Innovations, Factors Affecting the Innovation Process in Organisations, Characteristics of Human Resource Management Innovations, Conditions Necessary for Successful HRMI Implementation, Current Trends in Human Resource Management Innovations, Innovative Human Resource Management Practices in India, How Human Resource Management Practices Contribute to Organisational Innovation, How to Make Human Resource Management Innovations Sustainable.

**Module - 6 HR Leadership and Organisation Transformation** **7 hours**

Future of Human Resource Management: The next generation HR professionalism, Critical HR Issues of Today and Tomorrow, Changing Mental Models: HR’s Most Important Task, HR roles critical for business survival, HR profession in today’s changeful workplace, HR and Technology.

**Course Outcomes:**

At the end of the course the student will be able to:

1. Gain practical experience in the field of Human Resource Concepts, functions and theories.
2. Acquire the conceptual insight of Human Resource and various functions of HR.
3. Apply personnel, managerial and welfare aspects of HR.
4. Develop a greater understanding about HR practices, analyse the trends in the field of HR.

**Practical Component:**

- An visit to Organisation and interact with HR Manager and list out the roles played by HR manager.
- Meet Recruitment Manager and ask- 10 questions one asks during Interview.
- Meet Training and Development Manager and list out various training given to employees; basis of training program; Need analysis.
- Visit any Service Organisation and observe HR functions; List them.

**CO-PO MAPPING**

CO	PO				
	PO1	PO2	PO3	PO4	PO5
CO1	X	X	X		X
CO2	X	X		X	
CO3	X	X	X		
CO4	X			X	

**Question paper pattern:**

The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 60.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks.
- Each full question will have sub question covering all the topics under a Module.
- The students will have to answer five full questions; selecting four full question from question number one to seven and question number eight is compulsory.
- 100 percent theory in the SEE

**Textbooks**

Sl No	Title of the book	Name of the Author/s	Publisher Name	Edition and year
1	Human Resource Management: Theory and Practices,	R. C. Sharma, Nipun Sharma	Sage Publication India Pvt. Ltd.,	2019
2	Human Resource Management: Concepts	Amitabha Sengupta	Sage Publication India Pvt. Ltd.	2019

<b>ENTREPRENEURSHIP AND LEGAL ASPECTS</b>			
Course Code	20MBA26	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives:</b>			
<ol style="list-style-type: none"> <li>1. To develop and strengthen entrepreneurial quality and motivation in students.</li> <li>2. To impart basic entrepreneurial skills and understandings to run a business efficiently and effectively.</li> <li>3. To provide insights to students on entrepreneurship opportunities, sources of funding and institutions supporting entrepreneurs.</li> <li>4. To make students understand the ways of starting a company of their own.</li> </ol>			
<b>Module -1 Introduction to Entrepreneur &amp; Entrepreneurship</b>			<b>7 hours</b>
Meaning of entrepreneur - Evolution of the concept - Functions of an Entrepreneur - Types of Entrepreneur - Intrapreneur- an emerging class - Concept of Entrepreneurship -Entrepreneurial Culture - Stages in entrepreneurial process. <b>Creativity and Innovation:</b> The role of creativity – The innovation Process – Sources of New Ideas – Methods of Generating Ideas – Creative Problem Solving – Entrepreneurial Process.			
<b>Module -2 Developing Business Model</b>			<b>9 hours</b>
Importance of Business Model – Starting a small scale industry -Components of an Effective Business Model, Osterwalder Business Model Canvas. <b>Business Planning Process:</b> Meaning of business plan - Business plan process - Advantages of business planning - Final Project Report with Feasibility Study - preparing a model project report for starting a new venture. <b>Lab Component and assignment: Designing a Business Model Canvas</b>			
<b>Module -3 Marketing function and forms of organisation</b>			<b>9 hours</b>
Industry Analysis – Competitor Analysis – Marketing Research for the New Venture – Defining the Purpose or Objectives – Gathering Data from Secondary Sources – Gathering Information from Primary Sources – Analyzing and Interpreting the Results – The Marketing Process <b>Forms of business organization:</b> Sole Proprietorship – Partnership – Limited liability partnership - Joint Stock Companies and Cooperatives.			
<b>Module -4 Entrepreneurial finance</b>			<b>7 hours</b>
<b>Entrepreneurial finance-</b> Estimating the financial needs of a new venture, internal sources of finance, external sources of finance, components of financial plan <b>Institutions supporting Entrepreneurs:</b> Small industry financing developing countries - A brief overview of financial institutions in India - Central level and state level institutions - SIDBI - NABARD - IDBI - SIDCO - Indian Institute of Entrepreneurship - DIC - Single Window - Latest Industrial Policy of Government of India.			
<b>Module -5 Rules And Legislation</b>			<b>9 hours</b>
Applicability of Legislation; Industries Development (Regulations) Act, 1951; Factories Act, 1948; Industrial Employment (Standing Orders) Act, 1946, Suspension, Stoppage of work, Termination of employment; Karnataka Shops and Establishment Act, 1961; Environment (Protection) Act, 1986; The sale of Goods Act, 1930; Industrial Dispute Act 1947.			
<b>Module-6 Company Incorporation</b>			<b>9 hours</b>
Process of Company Incorporation; process of registration; Importance of Marketing; Funding, Four stages of Start Up. <b>Intellectual property protection and Ethics:</b> Patents – Copyright - Trademark- Geographical indications – Ethical and social responsibility and challenges.			
<b>Course outcomes:</b>			
At the end of the course the student will be able to:			
<ol style="list-style-type: none"> <li>1. Display keen interest and orientation towards entrepreneurship, entrepreneurial opportunity Modules' in order to setup a business and to think creatively.</li> <li>2. To know about the various business models and B-Plans across Business sectors.</li> <li>3. Able to understand the importance of marketing and different forms of businesses.</li> <li>4. Become aware about various sources of funding and institutions supporting entrepreneurs.</li> <li>5. Awareness about legal aspects and ways to protect the ideas.</li> <li>6. To understand the ways of starting a company and to know how to protect their ideas.</li> </ol>			

**III SEMESTER  
CORE COURSES**

<b>EMERGING EXPONENTIAL TECHNOLOGIES</b>			
Course Code	20MBA301	CIE Marks	40
Teaching Hours/Week	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Objective of the Course:</b>			
<ol style="list-style-type: none"> <li>1. To understand the emerging technologies applicable in field of Management.</li> <li>2. To study data science as a tool for decision making in Management</li> <li>3. To understand the concept of AI, IOT and AR.</li> <li>4. To study other emerging technologies in Management.</li> </ol>			
<b>Module -1 Introduction to Emerging Technologies</b>			<b>9 hours</b>
Evolution of technologies; Introduction to Industrial revolution; Historical background of the Industrial Revolution; Introduction to Fourth industrial revolution (IR 4.0); Role of data for Emerging technologies; Enabling devices and networks for emerging technologies (programmable devices); Human to Machine Interaction; Future trends in emerging technologies.			
<b>Module -2 Data Science</b>			<b>7 hours</b>
Overview for Data Science; Definition of data and information; Data types and representation; Data Value Chain; Data Acquisition; Data Analysis; Data Curating; Data Storage; Data Usage; Basic concepts of Big Data.			
<b>Module -3 Artificial Intelligence(AI)</b>			<b>9 hours</b>
Concept of AI, meaning of AI, History of AI, Levels of AI, Types of AI, Applications of AI in Agriculture, Health, Business (Emerging market), Education, AI tools and platforms (eg: scratch/object tracking).			
<b>Module -4 Internet of Things (IoT)</b>			<b>9 hours</b>
Overview of IOT; meaning of IOT; History of IOT; Advantages of IOT; Challenges of IOT; IOT working process; Architecture of IOT; Devices and network; Applications of IOT at Smart home; Smart grid; Smart city; Wearable devices; Smart farming; IOT tools and platforms; Sample application with hands on activity.			
<b>Module-5 Augmented Reality (AR) and Virtual Reality (VR)</b>			<b>9 hours</b>
Introduction to AR, Virtual reality (VR), Augmented Reality (AR) vs mixed reality (MR), Architecture of AR systems. Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo.			
<b>Module-6 Ethics, Professionalism and Other Emerging Technologies</b>			<b>7 hours</b>
Technology and ethics, Digital privacy, Accountability and trust, Treats and challenges.			
<b>Other Technologies:</b> Block chain technology, Cloud and quantum computing, Autonomic computing, Computer vision, Cyber security, Additive manufacturing (3D Printing)			
<b>Course Outcomes:</b>			
By the end of this course the student will able to:			
<ol style="list-style-type: none"> <li>1. Identify different emerging technologies</li> <li>2. Select appropriate technology and tools for a given task</li> <li>3. Identify necessary inputs for application of emerging technologies</li> <li>4. Understand the latest developments in the area of technology to support business</li> </ol>			
<b>Practical Component:</b>			
<ul style="list-style-type: none"> <li>• Big data analysis using an analytical tool</li> <li>• Study the Application of AI in any one field and prepare a Report</li> <li>• Study the Ethical practices of a Company</li> <li>• 3D model Printing by Group or team</li> <li>• Exposing the students to usage of IoT</li> </ul>			

<b>INDUSTRIAL RELATIONS AND LABOUR LAWS</b>			
Course Code	20MBAHR305	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to describe and Identify the application of Labour Laws regulating Industrial Relations in Organisation</li> <li>2. The student will be able to describe and explain in her/his own words, the relevance and importance of Labour Laws and Industrial Relations in Organisation</li> <li>3. The student will be able to apply and solve the workplace problems through Labour Laws</li> <li>4. The student will be able to classify and categorise different Laws and Codes</li> <li>5. The student will be able to create and reconstruct Industrial Relations System to be adopted in the Organisation</li> <li>6. The student will be able to appraise and judge the practical applicability of Labour Laws regulating Industrial Relations in Organisation</li> </ol>			
<b>Module-1 Fundamental Aspects of Industrial Relations</b>			<b>9 hours</b>
Introduction, Nature of Industrial Relations, Approaches to Industrial Relations, Trade Unions: The Participants of Industrial Relation Activities, State and Employer/Management. The Participants of Industrial Relation Activities; <b>Evolution of Labour Legislation in India</b> - History of Labour Legislation in India, Objectives of Labour Legislation, Types of Labour Legislations in India, Constitutional Provisions for the Protection of Labour Workforce in India, Rights of Woman Workers; The Present Labour Laws and Codes			
<b>Module -2 Factories Act, 1948</b>			<b>7 hours</b>
Introduction, Objectives, Scope and Important Definitions, Approval, Licensing and Registration of Factories, Health and Safety of Workers, Provisions Related to Working Conditions, Hazardous Processes, Employee Welfare and Working Hours, Employment of Young Persons and Women, Annual Leaves with Wages, Penalties and Contingence of Offences			
<b>Module -3 Social Security Act</b>			<b>9 hours</b>
<b>The Employees' Compensation Act, 1923</b>			
Introduction, Objectives, Scope and Important Definitions of the Act, Eligibility, Rules for Workmen's Compensation, Amount and Distribution of Compensation, Notice, Claims and Other Important Provisions, Enforcement of Act and Provisions for Penalty			
<b>The Employees' State Insurance Act, 1948</b>			
Introduction, Objectives, Scope and Important Definitions, Administration of the Act, Finance and Audit, Contribution, Benefits, Obligations of Employers under the Act, Adjudication of Disputes, Claims and Penalties, Exemptions			
<b>The Maternity Benefit Act, 1961</b>			
Introduction, Objectives, Scope and Important Definitions, Provisions Related to Maternity, Benefits, Enforcement of the Act, Penalties and Offences, Miscellaneous Provisions of the Act			
<b>The Employees' Provident Funds and Miscellaneous Provisions Act, 1952</b>			
Introduction, Objectives, Scope and Important Definitions, Administration of the Schemes under the Act, Administration of the Act, Calculation of Money Due from Employers, Their Recovery and Employees', Provident Funds Appellate Tribunal, Enforcement of the Act, Penalties and Offences, Miscellaneous Provisions of the Act			
<b>The Payment of Gratuity Act, 1972</b>			
Introduction, Objectives, Scope and Important Definitions, Payment and Forfeiture of Gratuity and Exemption, Compulsory Insurance and Protection of Gratuity, Determination and Recovery of Gratuity, Enforcement of the Act, Penalties and Offences.			
<b>Module -4 Wages Act</b>			<b>9 hours</b>
<b>The Payment of Wages Act, 1936</b>			
Introduction, Objectives, Scope and Important Definitions, Provisions for Payment of Wages, Deductions from Wages, Enforcement of the Act, Penalties and Offences, Miscellaneous, Provisions of the Act			
<b>The Minimum Wages Act, 1948</b>			
Introduction, Objectives, Scope and Important Definitions, Fixation and Revision of Wages, Payment of			

Minimum Wages, Enforcement of the Act, Penalties and Offences, Miscellaneous, Provisions of the Act

**The Payment of Bonus Act, 1965**

Introduction, Objectives, Scope and Important Definitions of the Act, Eligibility, Disqualification and Amount of Bonus, Calculation of Bonus, Special and Miscellaneous Provisions, Dispute, Penalties and Offences

**Module -5 Regulating Employer-Employee Relations Act**

**9 hours**

**The Industrial Disputes Act, 1947**

Introduction, Objectives, Scope and Important Definitions, Procedure for Settlement of Industrial Disputes and Authorities under the Act, (Chapter II), Notice of Change in Conditions of Service (Chapter II-A), References of Disputes to Boards, Courts or Tribunals and Voluntary References

(Chapter III) Award and Settlements, Strikes and Lockouts (Chapter V), Layoff and Retrenchment (Chapters V-A and V-B), Transfer and Closing Down of Undertakings, Special Provisions Related to Layoff, Retrenchment and Closure (Chapter V-B), Unfair Labour Practices (Chapter V-C), Miscellaneous Provisions of the Act (Chapter VII)

**The Industrial Employment (Standing Orders) Act, 1946**

Introduction, Objectives, Scope and Important Definitions of the Act, Procedure for Certification of Standing Orders, Other Provisions Relating to Standing Orders, Miscellaneous Provisions of the Act, Penalties and Offences

**The Trade Unions Act, 1926**

Introduction, Objectives, Scope and Important Definitions, Registration and Cancellation of Registration of Trade Unions, Rights and Duties of Registered Trade Unions, Amalgamation and Dissolution of Trade Union, Penalties

**Module – 6 Contract Labour (Regulation and Abolition) Act, 1970**

**7 hours**

**Contract Labour (Regulation and Abolition) Act, 1970**

Introduction, Objectives, Scope and Important Definitions, Registration of Establishments Employing Contract Labour, The Advisory Boards, Prohibition of Employment of Contract Labour, Appointment of Licensing Officer and Licensing of Contractors, Welfare and Health of Contract Labour, Offences by Companies

**The Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959**

Introduction, Objectives, Scope and Important Definitions, Notification of Vacancies, Penalties Miscellaneous Provisions, The Employment Exchanges (Compulsory Notification of Vacancies) Amendment Bill, 2013

**Course outcomes:**

At the end of the course the student will be able to:

1. Gain practical experience related to labour legislations in India across various sectors.
2. Acquire conceptual knowledge of Industrial relations and labour laws followed within industries.
3. Develop the greater understanding of IR concepts and its application in solving various issues in IR.
4. Apply the IR and labour laws concepts in various industries in India.

**Practical Component:**

- Visit Any Organisation and discuss the applicability of Laws at the workplace
- Meet HR Manager and discuss the statutory and non-statutory measure
- Visit Labour Dept, Government, and Interact with Labour Commissioner

**CO-PO MAPPING**

CO	PO				
	PO1	PO2	PO3	PO4	PO5
CO1	X				
CO2	X			X	
CO3	X		X		X
CO4	X		X		



## HUMAN RESOURCE SPECIALISATION COURSES

<b>ORGANISATIONAL LEADERSHIP</b>			
Course Code	20MBAHR401	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to describe and Identify the application of Leadership styles and practices followed in the Organisation</li> <li>2. The student will be able to describe and explain in her/his own words, the relevance and importance of various Leadership practices and style followed in the Organisation</li> <li>3. The student will be able to apply and solve the workplace problems through Leadership practices</li> <li>4. The student will be able to classify and categories different Leadership practices and styles followed in the Organisation</li> <li>5. The student will be able to create and reconstruct Leadership required to manage the Human Resources in the Organisation</li> <li>6. The student will be able to appraise and judge the practical applicability of Leadership practices followed in the Organisation</li> </ol>			
<b>Module-1 Introduction</b>			<b>5 hours</b>
Concept of Leadership, Ways of Conceptualizing Leadership, Definition and Components, Leadership Described, Trait Versus Process Leadership, Assigned Versus Emergent Leadership. Leadership and Power, Leadership and Coercion, Leadership and Management.			
<b>Module -2 Model of Leadership - Part A</b>			<b>7 hours</b>
<b>Trait Approach</b>			
Description, Intelligence, Self-Confidence, Determination, Integrity, Sociability, Five-Factor Personality Model and Leadership, Emotional Intelligence, How Does the Trait Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Skills Approach</b>			
Description, Three-Skill Approach, Technical Skill, Human Skill, Conceptual Skill, Summary of the Three-Skill Approach, Skills Model, Competencies, Individual Attributes, Leadership, Outcomes, Career Experiences, Environmental Influences, Summary of the Skills Model, How Does the Skills Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Behavioral Approach</b>			
Description, The Ohio State Studies, The University of Michigan Studies, Blake and Mouton's Managerial (Leadership) Grid, Authority-Compliance (9,1), Country-Club Management (1,9) Impoverished Management (1,1), Middle-of-the-Road Management (5,5), Team Management (9,9), Paternalism/Maternalism, Opportunism, How Does the Behavioral Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Situational Approach</b>			
Description, Leadership Styles, Development Levels, How Does the Situational Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Module -3 Model of Leadership - Part B</b>			<b>7 hours</b>
<b>Path-Goal Theory</b>			
Description, Leader Behaviors, Directive Leadership, Supportive Leadership, Participative Leadership, Achievement-Oriented Leadership, Follower Characteristics, Task Characteristics How Does Path-Goal Theory Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Leader-Member Exchange Theory</b>			
Description, Early Studies, Later Studies, Leadership Making, How Does LMX Theory Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Transformational Leadership</b>			
Description, Transformational Leadership Defined, Transformational Leadership and Charisma, A Model of Transformational Leadership, Transformational Leadership Factors, Transactional Leadership Factors, Non-leadership Factor, Other Transformational Perspectives Bennis and Nanus, Kouzes and Posner, How Does the Transformational Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Authentic Leadership</b>			

<p>Description, Authentic Leadership Defined, Approaches to Authentic Leadership, Practical Approach, Theoretical Approach, How Does Authentic Leadership Theory Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument</p> <p><b>Psychodynamic Approach</b>  Description, The Clinical Paradigm, History of the Psychodynamic Approach, Key Concepts and Dynamics Within the Psychodynamic Approach,  1. Focus on the Inner Theatre  2. Focus on the Leader-Follower Relationships  Social Defense Mechanisms, Mirroring and Idealizing, Identification With the Aggressor  3. Focus on the Shadow Side of Leadership Narcissism  How Does the Psychodynamic Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument</p>	
<b>Module -4 Leadership Instrument</b>	<b>7 hours</b>
<p>Description, Culture Defined, Related Concepts, Ethnocentrism, Prejudice, Dimensions of Culture, Uncertainty Avoidance, Power Distance, Institutional Collectivism, In-Group, Collectivism, Gender Egalitarianism, Assertiveness, Future Orientation, Performance Orientation, Humane Orientation, Clusters of World Cultures, Characteristics of Clusters, Anglo, Confucian Asia, Eastern Europe, Germanic Europe, Latin America, Latin Europe, Middle East, Nordic Europe, Southern Asia, Sub-Saharan Africa, Leadership Behavior and Culture, Clusters, Eastern Europe Leadership Profile, Latin America Leadership Profile, Latin Europe Leadership Profile, Confucian Asia Leadership Profile, Nordic Europe Leadership Profile, Anglo Leadership Profile, Sub-Saharan Africa Leadership Profile, Southern Asia Leadership Profile, Germanic Europe Leadership Profile, Middle East Leadership Profile, Universally Desirable and Undesirable Leadership Attributes, Strengths, Criticisms, Application, Case Studies on Leadership Instrument</p>	
<b>Module -5 Ethical Leadership</b>	<b>7 hours</b>
<p>Description, Ethics Defined ;Level 1. Preconventional Morality ;Level 2. Conventional Morality; Level 3. Postconventional Morality; Ethical Theories, Centrality of Ethics to Leadership, Heifetz’s Perspective on Ethical Leadership; Burns’s Perspective on Ethical Leadership, The Dark Side of Leadership, Principles of Ethical Leadership, Ethical Leaders Respect Others, Ethical Leaders Serve Others, Ethical Leaders Are Just, Ethical Leaders Are Honest, Ethical Leaders Build CommModuley, Strengths, Criticisms, Application, Case Studies, Leadership Instrument.</p>	
<b>Module – 6 Leadership Practices</b>	<b>7 hours</b>
<p>Select Case of Successful Leadership Practices; TATA Group; Reliance; Infosys; WIPRO; and Organisations which are listed as Fortune Companies. Survey Report analysis of NHRD; NIPM; CII; FICCI; Conference Board; CCL - Centre of Creative Leadership.</p>	
<p><b>Course Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Understand the fundamental concepts and principles, theories of Organizational Leadership.</li> <li>2. Analyze the organizational leadership style, approaches and traits, its impact on the followers by using leadership theories and instruments.</li> <li>3. Developing better insight in understanding the leadership traits that influence them to work effectively in group.</li> <li>4. Demonstrate their ability to apply of their knowledge in organizational leadership.</li> </ol> <p><b>Practical Components;</b></p> <ul style="list-style-type: none"> <li>• Meet any Leader- Organisation or Academic and ask 10 questions related to Leadership. Than analysis the type of leadership style adopted.</li> <li>• Meet 4-5 Leaders from different roles and compare - contrast the different style son leadership.</li> <li>• Meet Gender specific leaders and try analysing who makes the best leader in which type of set-up.</li> </ul> <p><b>Note: Faculty can either identify the organizations/ leaders/job profile or students can be allowed to choose the same.</b></p>	

<b>MANAGEMENT &amp; ORGANIZATIONAL BEHAVIOUR</b>			
Course Code	20MBA11	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to recite the theories and models of Management and Organisational Behavior.</li> <li>2. The student will be able to apply and solve the workplace problems.</li> <li>3. The student will be able to classify in differentiating between the best methods to solve the problem.</li> <li>4. The student will be able to compare the appropriate framework for solving the problems at the workplace</li> <li>5. The student will be able to design model in dealing with the problems in the organisation.</li> </ol>			
<b>Module-1 Introduction to Management</b>			<b>9 hours</b>
<b>Management</b> -Introduction, Meaning, Nature, Objectives, Importance, Difference between Administration and Management, Levels of Management, Types of Managers, Managerial Skills, Managerial Competencies, Scope of Management, Functions of Management, Evolution of Management Thought, Fayol's fourteen principles of Management, Recent Trends in Management.			
<b>Module -2 Functions of Management</b>			<b>10 hours</b>
<b>Planning-</b> Definition, Features, Nature, Importance, Types, Steps in Planning, Planning Tools and Techniques, Essentials of a Good Plan. <b>Organisation-</b> Definitions, Importance, Principles, Types of Organisation Structures, Span of Control, Centralisation and Decentralisation of Authority. <b>Directing-</b> Definitions, Importance, Elements of Directing, Principles of Directing, Characteristics of Directing; <b>Controlling-</b> Definitions, Need of Controlling, Characteristics of Control, Steps in the Controlling Process, Resistance to Control, Design of Effective Control System, Types of Control, Control Techniques. <b>Decision-making-</b> Concepts, Types, Models, Difficulties in Decision-making, Decision-making for Organisational Effectiveness, Decision-making Styles.			
<b>Module -3 Organisational Behaviour</b>			<b>10 hours</b>
<b>Organisational Behaviour:</b> Introduction, Definitions, Nature, Goals, Importance, Approaches to Organisational Behaviour, Models. <b>Attitude-</b> Meaning, Definition, Types, Components, Attitudes and Behaviour, <b>Changing Attitudes in the Workplace;</b> <b>Perception-</b> Perception, Perceptual Process, Factors Influencing Perception, Perception and Decision-making; <b>Personality-</b> Definitions, Factors Influencing Personality, Big Five Personality Traits, Myers-Briggs Type Indicator (MBTI), Personality Tools and Tests; <b>Motivation-</b> Definitions, Process of Motivation (Cycle of Motivation), Nature, Importance, Types, Theories.			
<b>Module -4 Managing Human at Work</b>			<b>7 hours</b>
<b>Group Dynamics-</b> Meaning of Group, Group Characteristics, Classification of Groups, Models of Group Development, Meaning of Group Dynamics, Group Behaviour, <b>Impact of Group on Individual's Behaviour, Impact of External Factors on Group Behaviour.</b> <b>Teamwork-</b> Nature of Teams, Team Characteristics, Teams Versus Groups, <b>Teamwork,</b> Processes of Teamwork, Types of Teams, <b>Reasons for Team Failure, Creating Effective Teams.</b>			
<b>Module-5 Organizational Power, Politics and Culture</b>			<b>7 hours</b>
<b>Power and Politics-</b> Nature of Power and Politics, Early Voices, <b>Questioning Power and Authority, Sources of Power for Individuals, Managing Organisational Politics.</b> <b>Culture-</b> Definitions of Organisational Culture, Strong Versus Weak Culture, Characteristics, Types, Levels, Dimensions, Creating Organisational Culture, Changing Organisational Culture.			
<b>Module - 6 Change and Stress Management</b>			<b>7 hours</b>
<b>Change-</b> Nature, Characteristics, Process, Forces Responsible for Change in Organizations, Resistance to Change, Managing Resistance to Change. <b>Stress Management-</b> Definitions, Understanding Stress, Relation between Stress and Performance, Level, Signs and Symptoms of Stress, Types of Stress, Causes of Stress, Managing Stress.			
<b>Course Outcomes:</b>			
<ol style="list-style-type: none"> <li>1. Gain practical experience in the field of Management and Organization Behaviour</li> <li>2. Acquire the conceptual knowledge of Management, various functions of Management and theories in Organizational Behaviour.</li> <li>3. Apply managerial and behaviour knowledge in real world situations.</li> <li>4. Develop a greater understanding about Management and Behavioural aspects to analyse the concepts related to individual behavior, attitude, perception and personality.</li> <li>5. Understand and demonstrate their exposure on recent trends in management.</li> </ol>			

## II SEMESTER

<b>HUMAN RESOURCE MANAGEMENT</b>			
Course Code	20MBA21	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to recite the theories and various functions of Human Resources Management</li> <li>2. The student will be able to describe and explain in her/his own words, the relevance and importance of Human Resources Management at workplace</li> <li>3. The student will be able to apply and solve the workplace problems through Human Resources Management intervention</li> <li>4. The student will be able to classify and categorise in differentiating between the best method to solve the problem</li> <li>5. The student will be able to compare and contrast different approaches of HRM for solving the complex issues and problems at the workplace</li> <li>6. The student will be able to design and develop an original framework and model in dealing with the problems in the organization.</li> </ol>			
<b>Module-1 Introduction</b>			<b>7 hours</b>
Human Resource Management and Personnel Management, The Importance of Human Resource Management, Models of Human Resource Management, Evolution of Human Resource Management, HRM in India, The Factors Influencing Human Resource Management , Human Resource Management and Line Managers, The HR Competencies, Human Resource Management and Firm Performance.			
<b>Module -2 Human Resource Planning</b>			<b>9 hours</b>
Importance of HR Planning, Manpower Planning to HR Planning, Factors Affecting HR Planning, Benefits of HR Planning, HRP Process, Tools for Demand Forecasting, Attributes of an Effective HR Planning, Barriers to HR Planning, The Challenges for HR, Process of Job Analysis and Job Evaluation.			
<b>Recruitment and Selection:</b> Importance of Recruitment, Recruitment Policies, Factors Influencing Recruitment, Recruitment Process, Sources, Evaluation of Recruitment Process, Recruitment Strategy ; Selection, Future Trends in Recruitment; Selection Process; Selection Tests; Factors Influencing Selections, Challenges in Selection, Application Tracking System using MS-Excel			
<b>Learning, Training, and Development:</b> Training, Learning and Development, Learning Theories, The Future of Training, Learning, and Development: Crystal Gazing into the Future, World of Learning. Process of training and Techniques of Training			
<b>Module -3 Performance Management and Appraisal</b>			<b>9 hours</b>
Objectives of Performance Management, Performance Management and Performance Appraisal, Common Problems with Performance Appraisals, Performance Management Process, Types of Performance Rating Systems, Future of Performance Management.			
<b>Compensation and Benefits</b>			
Introduction, Definitions, Total Compensation, Total Rewards System, Forms of Pay, Theories of Compensation, External Factors, Internal Factors, Establishing Pay Rates, Employee Benefits.			
<b>Industrial Relations</b>			
Decent Workplace: International Labor Organisation, Industrial Relations, The Objectives of Industrial Relations, Approaches of Industrial Relations Systems, The Actors in Industrial Relations, Indian Context, Industrial Relations and Human Resource Management.			
<b>Employment Relations</b> - The Definition, Traditional Employment Relations, Actors in the Fray: Role-taking, The New Frameworks for Employment Relations, The Future of Employee Relations.			
<b>Module -4 Human Resource Management in Small and Medium Enterprises</b>			<b>9 hours</b>
Definition of SMEs, Human Resource Management and Performance in SMEs, The Difference in Adoption of Human Resource Management: SMEs and Large Firms, Indian Experience, Impact of Weak Adoption of Human Resource Management in SMEs, Factors Influencing the Adoption of Human Resource Management Practices in SMEs, Future of Human Resource. Management in SMEs.			
<b>Human Resource Management in the Service Sector</b>			
Introduction, The Emergence of the Services Sector, Implications for Human Resource, Management Function, Differences Between Services Sector and the Manufacturing Sector, Difference in Human Resource Management			

Practices in Services and Manufacturing Sectors, Human Resource Management and Service Quality Correlation, Some Specific Industries in Services Sector, Trade Unions in Services Sector, Models of Union Strategies.

Case Study on “Training Program at ABC Cement” .

**Module -5 Human Resource Management Innovations** **9 hours**

Introduction, Human Resource Management and Innovations, Factors Affecting the Innovation Process in Organisations, Characteristics of Human Resource Management Innovations, Conditions Necessary for Successful HRMI Implementation, Current Trends in Human Resource Management Innovations, Innovative Human Resource Management Practices in India, How Human Resource Management Practices Contribute to Organisational Innovation, How to Make Human Resource Management Innovations Sustainable.

**Module - 6 HR Leadership and Organisation Transformation** **7 hours**

Future of Human Resource Management: The next generation HR professionalism, Critical HR Issues of Today and Tomorrow, Changing Mental Models: HR’s Most Important Task, HR roles critical for business survival, HR profession in today’s changeful workplace, HR and Technology.

**Course Outcomes:**

At the end of the course the student will be able to:

1. Gain practical experience in the field of Human Resource Concepts, functions and theories.
2. Acquire the conceptual insight of Human Resource and various functions of HR.
3. Apply personnel, managerial and welfare aspects of HR.
4. Develop a greater understanding about HR practices, analyse the trends in the field of HR.

**Practical Component:**

- An visit to Organisation and interact with HR Manager and list out the roles played by HR manager.
- Meet Recruitment Manager and ask- 10 questions one asks during Interview.
- Meet Training and Development Manager and list out various training given to employees; basis of training program; Need analysis.
- Visit any Service Organisation and observe HR functions; List them.

**CO-PO MAPPING**

CO	PO				
	PO1	PO2	PO3	PO4	PO5
CO1	X	X	X		X
CO2	X	X		X	
CO3	X	X	X		
CO4	X			X	

**Question paper pattern:**

The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 60.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks.
- Each full question will have sub question covering all the topics under a Module.
- The students will have to answer five full questions; selecting four full question from question number one to seven and question number eight is compulsory.
- 100 percent theory in the SEE

**Textbooks**

Sl No	Title of the book	Name of the Author/s	Publisher Name	Edition and year
1	Human Resource Management: Theory and Practices,	R. C. Sharma, Nipun Sharma	Sage Publication India Pvt. Ltd.,	2019
2	Human Resource Management: Concepts	Amitabha Sengupta	Sage Publication India Pvt. Ltd.	2019

## HUMAN RESOURCE SPECIALISATION COURSES

<b>ORGANISATIONAL LEADERSHIP</b>			
Course Code	20MBAHR401	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to describe and Identify the application of Leadership styles and practices followed in the Organisation</li> <li>2. The student will be able to describe and explain in her/his own words, the relevance and importance of various Leadership practices and style followed in the Organisation</li> <li>3. The student will be able to apply and solve the workplace problems through Leadership practices</li> <li>4. The student will be able to classify and categories different Leadership practices and styles followed in the Organisation</li> <li>5. The student will be able to create and reconstruct Leadership required to manage the Human Resources in the Organisation</li> <li>6. The student will be able to appraise and judge the practical applicability of Leadership practices followed in the Organisation</li> </ol>			
<b>Module-1 Introduction</b>			<b>5 hours</b>
Concept of Leadership, Ways of Conceptualizing Leadership, Definition and Components, Leadership Described, Trait Versus Process Leadership, Assigned Versus Emergent Leadership. Leadership and Power, Leadership and Coercion, Leadership and Management.			
<b>Module -2 Model of Leadership - Part A</b>			<b>7 hours</b>
<b>Trait Approach</b>			
Description, Intelligence, Self-Confidence, Determination, Integrity, Sociability, Five-Factor Personality Model and Leadership, Emotional Intelligence, How Does the Trait Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Skills Approach</b>			
Description, Three-Skill Approach, Technical Skill, Human Skill, Conceptual Skill, Summary of the Three-Skill Approach, Skills Model, Competencies, Individual Attributes, Leadership, Outcomes, Career Experiences, Environmental Influences, Summary of the Skills Model, How Does the Skills Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Behavioral Approach</b>			
Description, The Ohio State Studies, The University of Michigan Studies, Blake and Mouton's Managerial (Leadership) Grid, Authority-Compliance (9,1), Country-Club Management (1,9) Impoverished Management (1,1), Middle-of-the-Road Management (5,5), Team Management (9,9), Paternalism/Maternalism, Opportunism, How Does the Behavioral Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Situational Approach</b>			
Description, Leadership Styles, Development Levels, How Does the Situational Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Module -3 Model of Leadership - Part B</b>			<b>7 hours</b>
<b>Path-Goal Theory</b>			
Description, Leader Behaviors, Directive Leadership, Supportive Leadership, Participative Leadership, Achievement-Oriented Leadership, Follower Characteristics, Task Characteristics How Does Path-Goal Theory Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Leader-Member Exchange Theory</b>			
Description, Early Studies, Later Studies, Leadership Making, How Does LMX Theory Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Transformational Leadership</b>			
Description, Transformational Leadership Defined, Transformational Leadership and Charisma, A Model of Transformational Leadership, Transformational Leadership Factors, Transactional Leadership Factors, Non-leadership Factor, Other Transformational Perspectives Bennis and Nanus, Kouzes and Posner, How Does the Transformational Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument			
<b>Authentic Leadership</b>			

<p>Description, Authentic Leadership Defined, Approaches to Authentic Leadership, Practical Approach, Theoretical Approach, How Does Authentic Leadership Theory Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument</p> <p><b>Psychodynamic Approach</b>  Description, The Clinical Paradigm, History of the Psychodynamic Approach, Key Concepts and Dynamics Within the Psychodynamic Approach,  1. Focus on the Inner Theatre  2. Focus on the Leader-Follower Relationships  Social Defense Mechanisms, Mirroring and Idealizing, Identification With the Aggressor  3. Focus on the Shadow Side of Leadership Narcissism  How Does the Psychodynamic Approach Work? Strengths, Criticisms, Application, Case Studies, Leadership Instrument</p>	
<b>Module -4 Leadership Instrument</b>	<b>7 hours</b>
<p>Description, Culture Defined, Related Concepts, Ethnocentrism, Prejudice, Dimensions of Culture, Uncertainty Avoidance, Power Distance, Institutional Collectivism, In-Group, Collectivism, Gender Egalitarianism, Assertiveness, Future Orientation, Performance Orientation, Humane Orientation, Clusters of World Cultures, Characteristics of Clusters, Anglo, Confucian Asia, Eastern Europe, Germanic Europe, Latin America, Latin Europe, Middle East, Nordic Europe, Southern Asia, Sub-Saharan Africa, Leadership Behavior and Culture, Clusters, Eastern Europe Leadership Profile, Latin America Leadership Profile, Latin Europe Leadership Profile, Confucian Asia Leadership Profile, Nordic Europe Leadership Profile, Anglo Leadership Profile, Sub-Saharan Africa Leadership Profile, Southern Asia Leadership Profile, Germanic Europe Leadership Profile, Middle East Leadership Profile, Universally Desirable and Undesirable Leadership Attributes, Strengths, Criticisms, Application, Case Studies on Leadership Instrument</p>	
<b>Module -5 Ethical Leadership</b>	<b>7 hours</b>
<p>Description, Ethics Defined ;Level 1. Preconventional Morality ;Level 2. Conventional Morality; Level 3. Postconventional Morality; Ethical Theories, Centrality of Ethics to Leadership, Heifetz’s Perspective on Ethical Leadership; Burns’s Perspective on Ethical Leadership, The Dark Side of Leadership, Principles of Ethical Leadership, Ethical Leaders Respect Others, Ethical Leaders Serve Others, Ethical Leaders Are Just, Ethical Leaders Are Honest, Ethical Leaders Build CommModuley, Strengths, Criticisms, Application, Case Studies, Leadership Instrument.</p>	
<b>Module – 6 Leadership Practices</b>	<b>7 hours</b>
<p>Select Case of Successful Leadership Practices; TATA Group; Reliance; Infosys; WIPRO; and Organisations which are listed as Fortune Companies. Survey Report analysis of NHRD; NIPM; CII; FICCI; Conference Board; CCL - Centre of Creative Leadership.</p>	
<p><b>Course Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Understand the fundamental concepts and principles, theories of Organizational Leadership.</li> <li>2. Analyze the organizational leadership style, approaches and traits, its impact on the followers by using leadership theories and instruments.</li> <li>3. Developing better insight in understanding the leadership traits that influence them to work effectively in group.</li> <li>4. Demonstrate their ability to apply of their knowledge in organizational leadership.</li> </ol> <p><b>Practical Components;</b></p> <ul style="list-style-type: none"> <li>• Meet any Leader- Organisation or Academic and ask 10 questions related to Leadership. Than analysis the type of leadership style adopted.</li> <li>• Meet 4-5 Leaders from different roles and compare - contrast the different style son leadership.</li> <li>• Meet Gender specific leaders and try analysing who makes the best leader in which type of set-up.</li> </ul> <p><b>Note: Faculty can either identify the organizations/ leaders/job profile or students can be allowed to choose the same.</b></p>	

<b>PERSONAL GROWTH AND INTERPERSONAL EFFECTIVENESS</b>			
Course Code	20MBAHR402	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>1. The student will be able to describe and Identify the application of various PG and IE framework</li> <li>2. The student will be able to describe and explain in her/his own words, the relevance and importance of various PG and IE to be adopted in the Organisation</li> <li>3. The student will be able to apply and improve the workplace effectiveness through various PG and IE</li> <li>4. The student will be able to classify and categorise different PG and IE practices and to be followed in the Organisation</li> <li>5. The student will be able to create and reconstruct Leadership required to manage the Human Resources in the Organisation</li> <li>6. The student will be able to appraise and judge the practical applicability of various PG and IE practices to be followed in the Organisation</li> </ol>			
<b>Module-1 Dynamics of Personal Growth</b>			<b>4 hours</b>
<b>Dynamics of Personal Growth</b> Meaning, nature and scope of personal growth. Self-awareness and self-esteem, life roles, social roles and organisational roles, role clarity and role boundaries. Ego states- Id, ego and super ego and defense mechanism. Developing a self-improvement plan.			
<b>Module -2 Interpersonal Trust</b>			<b>4 hours</b>
Openness, confidentiality, blind spot and unknown part of personality. Self-disclosure, seeking feedback, self-reflection and practicing new behaviors. Discovering facets of interpersonal trust through Johari Window.			
<b>Module -3 Understanding Human Personality and Neuro Functioning</b>			<b>7 hours</b>
Personality theories, Carl Jung's theory of personality types and Myers Briggs Type Indicator test (MBTI), Trait theories- Guilford Peogut, PF 16 and Type A and B, Emotional intelligence. <b>Basic functions of mind:</b> Creativity and innovation. Blocks to creativity. Creativity processes and tools- convergent and divergent thinking. Six thinking Hats, Neuro Linguistic Programming.			
<b>Module -4 Attitudes, Beliefs, Values and their impact on Behaviour</b>			<b>7 hours</b>
Personal change meaning, nature and requisites. Social adjustments and habit formation. Locus of control. Habits of personal effectiveness. Seven habits of highly effective people.			
<b>Module -5</b>			<b>9 hours</b>
<b>Interpersonal relations and personal growth:</b> Interpersonal needs for openness, inclusion and control. Discovering the interpersonal orientation through FIRO-B. Conflict resolution and negotiation, time management and honouring the commitments			
<b>Module – 6 Transactional Analysis</b>			<b>9 hours</b>
Ego states, types of transactions and time structuring. Life position, scripts and games; T-group sensitivity training, encounter groups, appreciative enquiry and group relations conference (students may go through three days personal growth lab for experiential learning)			
<b>Course Outcomes:</b>			
<ol style="list-style-type: none"> <li>1. Have in-depth understanding the various personality traits which promotes personal growth.</li> <li>2. Analyze the concepts of human personality, behaviour and functioning of mind</li> <li>3. Learn and apply the psychometrics tests in understanding the personality traits.</li> <li>4. Develop the greater insight of self, and others through various theories and prepare the developmental plan for interpersonal effectiveness.</li> </ol>			
<b>Practical Components:</b>			
<ul style="list-style-type: none"> <li>• Students are expected to conduct an in-depth study about various personality traits &amp; TA and submit a detailed report.</li> <li>• Students must undergo psychometric test like MBTI, FIRO-B, Big Five etc, conduct SWOT analysis and prepare a personal growth plan based on the results</li> <li>• Ask the individual students to seek multisource feedback about their interpersonal effectiveness from peers, teachers, and parents; understand and reflect the feedback and prepare a development plan for interpersonal</li> </ul>			



<b>Module – 6 Diversity Management and CSR</b>				<b>7 hours</b>	
<p>Equal opportunities, Diversity Management, Work–life balance: practices and discourses; International Culture Management: Model Organisational Culture and Innovation, Models of Culture, Hofstede’s Four, Cultural Dimensions, Trompenaar’s Seven Cultural Dimensions, Globe’s Nine Cultural Dimensions, Edgar Schein’s Model of Culture Deal and Kennedy’s Culture Model, Schneider’s Culture Model, Cameron and Quinn’s Model of Culture Charles Handy’s Model of Culture Denison’s Model of Culture, Profile of Organisational Culture in International Organizations Managing International Culture. Corporate Social Responsibility and Sustainability through Ethical HRM practices. Ethics and corporate social responsibility International labour standards.</p>					
<b>Course Outcomes:</b>					
<ol style="list-style-type: none"> <li>1. Gain conceptual knowledge and practical experience in understanding the HR concepts globally.</li> <li>2. Comprehend and correlate the strategic approaches to HR aspects amongst PCN’s, TCN’s and HCN’s.</li> <li>3. Develop knowledge and apply the concepts of HR in global perspective</li> <li>4. Have a better insight of HR concepts, policies and practices by critically analysing the impact of contemporary issues globally.</li> </ol>					
<b>Practical Components:</b>					
<ul style="list-style-type: none"> <li>• A visit to Organisation and interact with HR Manager and list out the roles played by HR manager.</li> <li>• Meet Recruitment Manager and ask- 10 questions one asks during Interview.</li> <li>• Meet Training and Development Manager and list out various training given to employees; basis of training program; Need analysis.</li> <li>• Visit any Service Organisation and observe HR functions; List them.</li> </ul>					
<b>CO-PO MAPPING</b>					
	<b>PO</b>				
<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>CO1</b>	<b>X</b>		<b>X</b>		<b>X</b>
<b>CO2</b>	<b>X</b>		<b>X</b>		<b>X</b>
<b>CO3</b>	<b>X</b>	<b>X</b>	<b>X</b>		
<b>CO4</b>	<b>X</b>		<b>X</b>	<b>X</b>	<b>X</b>
<b>Question paper pattern:</b>					
<p>The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 60.</p> <ul style="list-style-type: none"> <li>• The question paper will have 8 full questions carrying equal marks.</li> <li>• Each full question is for 20 marks.</li> <li>• Each full question will have sub question covering all the topics under a Module.</li> <li>• The students will have to answer five full questions; selecting four full question from question number one to seven and question number eight is compulsory.</li> <li>• 100 percent theory in the SEE.</li> </ul>					
<b>Textbooks</b>					
Sl No	Title of the book		Name of the Author/s	Publisher Name	Edition and year
1	International Human Resource Management		Srinivas R. Kandula	Sage Publication India Pvt. Ltd.	2018
2	International Human Resource Management		Anne-Wil Harzing, Ashly H. Pinnington	Sage Publication India Pvt. Ltd.	4/e, 2015
3	Diversity at Work		Arthur P Brief	Cambridge University Press	2008

**B. E. CIVIL ENGINEERING**  
**Choice Based Credit System (CBCS) and Outcome Based Education (OBE)**  
**SEMESTER - VII**

**ENVIRONMENTAL PROTECTION AND MANAGEMENT**

Course Code	<b>18CV753</b>	CIE Marks	40
Teaching Hours/Week(L:T:P)	(3:0:0)	SEE Marks	60
Credits	03	Exam Hours	03

**Course Learning Objectives:** This course will enable students to gain knowledge in Environmental protection and Management systems

**Module -1**

**Environmental Management Standards:** Unique Characteristics of Environmental Problems - Systems approach to Corporate environmental management - Classification of Environmental Impact Reduction Efforts - Business Charter for Sustainable Production and Consumption – Tools, Business strategy drivers and Barriers - Evolution of Environmental Stewardship. Environmental Management Principles - National policies on environment, abatement of pollution and conservation of resources - Charter on Corporate responsibility for Environmental protection.

**Module -2**

**Environmental Management Objectives:** Environmental quality objectives – Rationale of Environmental standards: Concentration and Mass standards, Effluent and stream standards, Emission and ambient standards, Minimum national standards, environmental performance evaluation: Indicators, benchmarking. Pollution control Vs Pollution Prevention - Opportunities and Barriers – Cleaner production and Clean technology, closing the loops, zero discharge technologies.

**Module -3**

**Environmental Management System:** EMAS, ISO 14000 - EMS as per ISO 14001– benefits and barriers of EMS – Concept of continual improvement and pollution prevention - environmental policy – initial environmental review – environmental aspect and impact analysis – legal and other requirements- objectives and targets – environmental management programs – structure and responsibility – training awareness and competence- communication – documentation and document control – operational control – monitoring and measurement – management review.

**Module -4**

**Environmental Audit:** Environmental management system audits as per ISO 19011- – Roles and qualifications of auditors - Environmental performance indicators and their evaluation – Non conformance – Corrective and preventive actions -compliance audits – waste audits and waste minimization planning – Environmental statement (form V) - Due diligence audit.

**Module -5**

**Applications:** Applications of EMS, Waste Audits and Pollution Prevention Control: Textile, Sugar, Pulp & Paper, Electroplating, , Tanning industry. Hazardous Wastes - Classification, characteristics Treatment and Disposal Methods, Transboundary movement, disposal.

**Course outcomes:** After studying this course, students will be able to:

1. Appreciate the elements of Corporate Environmental Management systems complying to international environmental management system standards.
2. Lead pollution prevention assessment team and implement waste minimization options.
3. Develop, Implement, maintain and Audit Environmental Management systems for Organizations.

**Question paper pattern:**

- The question paper will have ten full questions carrying equal marks.
- Each full question will be for 20 marks.
- There will be two full questions (with a maximum of four sub- questions) from each module.
- Each full question will have sub- question covering all the topics under a module.
- The students will have to answer five full questions, selecting one full question from each module.

**Reference Books:**

1. Christopher Sheldon and Mark Yoxon, “Installing Environmental management Systems – a step by step guide” Earthscan Publications Ltd, London, 1999.
2. ISO 14001/14004: Environmental management systems – Requirements and Guidelines – International

Organisation for Standardisation, 2004

3. ISO 19011: 2002, "Guidelines for quality and/or Environmental Management System auditing, Bureau of Indian Standards, New Delhi, 2002
4. Paul L Bishop „Pollution Prevention: Fundamentals and Practice, McGraw- Hill International, Boston, 2000.
5. Environmental Management Systems: An Implementation Guide for Small and Medium-Sized Organizations, Second Edition, NSF International, Ann Arbor, Michigan, January 2001.

B. E. COMMON TO ALL PROGRAMMES				
Choice Based Credit System (CBCS) and Outcome Based Education (OBE)				
SEMESTER – V				
ENVIRONMENTAL STUDIES				
Course Code	18CIV59	CIE Marks	40	
Teaching Hours / Week (L:T:P)	(1:0:0)	SEE Marks	60	
Credits	01	Exam Hours	02	
<b>Module - 1</b>				
Ecosystems (Structure and Function): Forest, Desert, Wetlands, Riverine, Oceanic and Lake.				
Biodiversity: Types, Value; Hot-spots; Threats and Conservation of biodiversity, Forest Wealth, and Deforestation.				
<b>Module - 2</b>				
Advances in Energy Systems (Merits, Demerits, Global Status and Applications): Hydrogen, Solar, OTEC, Tidal and Wind.				
Natural Resource Management (Concept and case-studies): Disaster Management, Sustainable Mining, Cloud Seeding, and Carbon Trading.				
<b>Module - 3</b>				
Environmental Pollution (Sources, Impacts, Corrective and Preventive measures, Relevant Environmental Acts, Case-studies): Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution.				
Waste Management & Public Health Aspects: Bio-medical Wastes; Solid waste; Hazardous wastes; E-wastes; Industrial and Municipal Sludge.				
<b>Module - 4</b>				
Global Environmental Concerns (Concept, policies and case-studies): Ground water depletion/recharging, Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water; Resettlement and rehabilitation of people, Environmental Toxicology.				
<b>Module - 5</b>				
Latest Developments in Environmental Pollution Mitigation Tools (Concept and Applications): G.I.S. & Remote Sensing, Environment Impact Assessment, Environmental Management Systems, ISO14001; Environmental Stewardship- NGOs.				
Field work: Visit to an Environmental Engineering Laboratory or Green Building or Water Treatment Plant or Waste water treatment Plant; ought to be Followed by understanding of process and its brief documentation.				
<b>Course Outcomes:</b> At the end of the course, students will be able to:				
<ul style="list-style-type: none"> <li>• CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,</li> <li>• CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.</li> <li>• CO3: Demonstrate ecology knowledge of a complex relationship between biotic and abiotic components.</li> <li>• CO4: Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.</li> </ul>				
<b>Question paper pattern:</b>				
<ul style="list-style-type: none"> <li>• The Question paper will have 100 objective questions.</li> <li>• Each question will be for 01 marks</li> <li>• Student will have to answer all the questions in an OMR Sheet.</li> <li>• The Duration of Exam will be 2 hours.</li> </ul>				
SL. No.	Title of the Book	Name of the Author/s	Name of the Publisher	Edition and Year
<b>Textbook/s</b>				

1	Environmental Studies	Benny Joseph	Tata Mc Graw – Hill.	2 <sup>nd</sup> Edition, 2012
2.	Environmental Studies	S M Prakash	Pristine Publishing House, Mangalore	3 <sup>rd</sup> Edition' 2018
3	Environmental Studies – From Crisis to Cure	R. Rajagopalan	Oxford Publisher	2005
<b>Reference Books</b>				
1	Principals of Environmental Science and Engineering	Raman Sivakumar	Cengage learning, Singapur.	2 <sup>nd</sup> Edition, 2005
2	Environmental Science – working with the Earth	G.Tyler Miller Jr.	Thomson Brooks /Cole,	11 <sup>th</sup> Edition, 2006
3	Text Book of Environmental and Ecology	Pratiba Sing, Anoop Singh& Piyush Malaviya	Acme Learning Pvt. Ltd. New Delhi.	1 <sup>st</sup> Edition



**ENERGY ENGINEERING**  
**B.E, VII Semester, Mechanical Engineering**  
**[As per Choice Based Credit System (CBCS) scheme]**

Course Code	17ME71	CIE Marks	40
Number of Lecture Hours/Week	03+02	SEE Marks	60
Total Number of Lecture Hours	50(10 Hours per Module)	Exam Hours	03

Credits – 04

**Course Objectives:**

- Understand energy scenario, energy sources and their utilization
- Learn about energy conversion methods and their analysis
- Study the principles of renewable energy conversion systems
- Understand the concept of green energy and zero energy.

**Module - 1**

**Thermal Energy conversion system:** Review of energy scenario in India, General Philosophy and need of Energy, Different Types of Fuels used for steam generation, Equipment for burning coal in lump form, stokers, different types, Oilburners, Advantages and Disadvantages of using pulverized fuel, Equipment for preparation and burning of pulverized coal, unit system and bin system. Pulverized fuel furnaces, cyclone furnace, Coal and ash handling, Generation of steam using forced circulation, high and supercritical pressures. Chimneys: Natural, forced, induced and balanced draft, Calculations and numerical involving height of chimney to produce a given draft. Cooling towers and Ponds. Accessories for the Steam generators such as Superheaters, De-superheater, control of superheaters, Economizers, Air preheaters and re-heaters.

**Module - 2**

**Diesel Engine Power System:** Applications of Diesel Engines in Power field. Method of starting Diesel engines. Auxiliaries like cooling and lubrication system, filters, centrifuges, Oil heaters, intake and exhaust system, Layout of diesel power plant.

**Hydro-Electric Energy:** Hydrographs, flow duration and mass curves, unit hydrograph and numerical. Storage and pondage, pumped storage plants, low, medium and high head plants, Penstock, water hammer, surge tanks, gates and valves. General layout of hydel power plants.

**Module - 3**

**Solar Energy:** Fundamentals; Solar Radiation; Estimation of solar radiation on horizontal and inclined surfaces; Measurement of solar radiation data, Solar Thermal systems: Introduction; Basics of thermodynamics and heat transfer; Flat plate collector; Evacuated Tubular Collector; Solar air collector; Solar concentrator; Solar distillation; Solar cooker; Solar refrigeration and air conditioning; Thermal energy storage systems, Solar Photovoltaic systems: Introduction; Solar cell Fundamentals; Characteristics and classification; Solar cell: Module, panel and Array construction; Photovoltaic thermal systems

#### Module - 4

**Wind Energy:** Properties of wind, availability of wind energy in India, wind velocity and power from wind; major problems associated with wind power, wind machines; Types of wind machines and their characteristics, horizontal and vertical axis wind mills, coefficient of performance of a wind mill rotor (Numerical Examples).

**Tidal Power:** Tides and waves as energy suppliers and their mechanics; fundamental characteristics of tidal power, harnessing tidal energy, Limitations.

#### Module - 5

**Biomass Energy:** Introduction; Photosynthesis Process; Biofuels; Biomass Resources; Biomass conversion technologies; Urban waste to energy conversion; Biomass gasification.

**Green Energy:** Introduction: Fuel cells: Overview; Classification of fuel cells; Operating principles; Fuel cell thermodynamics Nuclear, ocean, MHD, thermoelectric and geothermal energy applications; Origin and their types; Working principles, Zero energy Concepts .

#### Course outcomes:

1. Summarize the basic concepts of thermal energy systems,
2. Identify renewable energy sources and their utilization.
3. Understand the basic concepts of solar radiation and analyze the working of solar PV and thermal systems.
4. Understand principles of energy conversion from alternate sources including wind, geothermal, ocean, biomass, biogas.
5. Understand the concepts and applications of fuel cells, thermoelectric converter and MHD generator.
6. Identify methods of energy storage for specific applications

#### TEXT BOOKS:

1. B H Khan, Non conventional energy resources, 3<sup>rd</sup> Edition, McGraw Hill Education
2. Principles of Energy conversion, A. W. Culp Jr., McGraw Hill. 1996

#### REFERENCE BOOKS

1. S.P. Sukhatme, Solar Energy: principles of Thermal Collection and Storage, Tata McGraw-Hill (1984).
2. C. S. Solanki, "Solar Photovoltaic's: Fundamental Applications and Technologies, Prentice Hall of India, 2009.
3. L.L. Freris, Wind Energy Conversion Systems, Prentice Hall, 1990.

<b>B. E. MECHANICAL ENGINEERING</b> <b>Choice Based Credit System (CBCS) and Outcome Based Education (OBE)</b> <b>SEMESTER –VI</b> <b>OPEN ELECTIVE A</b>			
<b>NON CONVENTIONAL ENERGY SOURCES</b>			
Course Code	<b>18ME651</b>	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03
<b>Course Learning Objectives:</b>			
<ul style="list-style-type: none"> <li>• To introduce the concepts of solar energy, its radiation, collection, storage and application.</li> <li>• To introduce the concepts and applications of Wind energy, Biomass energy, Geothermal energy and Ocean energy as alternative energy sources.</li> <li>• To explore society's present needs and future energy demands.</li> <li>• To examine energy sources and systems, including fossil fuels and nuclear energy, and then focus on alternate, renewable energy sources such as solar, biomass (conversions), wind power, geothermal, etc.</li> <li>• To get exposed to energy conservation methods.</li> </ul>			
<b>Module-1</b>			
<p><b>Introduction:</b> Energy source, India's production and reserves of commercial energy sources, need for non-conventional energy sources, energy alternatives, solar, thermal, photovoltaic. Water power, wind biomass, ocean temperature difference, tidal and waves, geothermal, tar sands and oil shale, nuclear (Brief descriptions); advantages and disadvantages, comparison (Qualitative and Quantitative).</p> <p><b>Solar Radiation:</b> Extra-Terrestrial radiation, spectral distribution of extra terrestrial radiation, solar constant, solar radiation at the earth's surface, beam, diffuse and global radiation, solar radiation data.</p> <p><b>Measurement of Solar Radiation:</b> Pyrometer, shading ring pyr heliometer, sunshine recorder, schematic diagrams and principle of working.</p>			
<b>Module-2</b>			
<p><b>Solar Radiation Geometry:</b> Flux on a plane surface, latitude, declination angle, surface azimuth angle, hour angle, zenith angle, solar altitude angle expression for the angle between the incident beam and the normal to a plane surface (No derivation) local apparent time. Apparent motion of sun, day length, numerical examples.</p> <p><b>Radiation Flux on a Tilted Surface:</b> Beam, diffuse and reflected radiation, expression for flux on a tilted surface (no derivations) numerical examples.</p> <p><b>Solar Thermal Conversion:</b> Collection and storage, thermal collection devices, liquid flat plate collectors, solar air heaters concentrating collectors (cylindrical, parabolic, paraboloid) (Quantitative analysis); sensible heat storage, latent heat storage, application of solar energy water heating. Space heating and cooling, active and passive systems, power generation, refrigeration, Distillation (Qualitative analysis), solar pond, principle of</p>			
<b>Module-3</b>			
<p><b>Performance Analysis of Liquid Flat Plate Collectors:</b> General description, collector geometry, selective surface (qualitative discussion) basic energy-balance equation, stagnation temperature, transmissivity of the cover system, transmissivity – absorptivity product, numerical examples. The overall loss coefficient, correlation for the top loss coefficient, bottom and side loss coefficient, problems (all correlations to be provided). Temperature distribution between the collector tubes, collector heat removal factor, collector efficiency factor and collector flow factor, mean plate temperature, instantaneous efficiency (all expressions to be provided). Effect of various parameters on the collector performance; collector orientation, selective surface, fluid inlet temperature, number covers, dust.</p> <p><b>Photovoltaic Conversion:</b> Description, principle of working and characteristics, application.</p>			
<b>Module-4</b>			
<p><b>Wind Energy :</b> Properties of wind, availability of wind energy in India, wind velocity and power from wind; major problems associated with wind power, wind machines; Types of wind machines and their characteristics, horizontal and vertical axis wind mills, elementary design principles; coefficient of performance of a wind mill rotor, aerodynamic considerations of wind mill design, numerical examples.</p>			



**Tidal Power:** Tides and waves as energy suppliers and their mechanics; fundamental characteristics of tidal power, harnessing tidal energy, limitations.

**Ocean Thermal Energy Conversion:** Principle of working, Rankine cycle, OTEC power stations in the world, problems associated with OTEC.

#### Module-5

**Geothermal Energy Conversion:** Principle of working, types of geothermal station with schematic diagram, geothermal plants in the world, problems associated with geothermal conversion, scope of geothermal energy.

**Energy from Bio Mass:** Photosynthesis, photosynthetic oxygen production, energy plantation, bio gas production from organic wastes by anaerobic fermentation, description of bio-gas plants, transportation of bio-gas, problems involved with bio-gas production, application of bio-gas, application of bio-gas in engines, advantages.

**Hydrogen Energy:** Properties of Hydrogen with respect to its utilization as a renewable form of energy, sources of hydrogen, production of hydrogen, electrolysis of water, thermal decomposition of water, thermo chemical production bio-chemical production.

**Course Outcomes:** At the end of the course, the student will be able to:

- CO1: Describe the environmental aspects of non-conventional energy resources. In Comparison with various conventional energy systems, their prospects and limitations.
- CO2: Know the need of renewable energy resources, historical and latest developments.
- CO3: Describe the use of solar energy and the various components used in the energy production with respect to applications like-heating, cooling, desalination, power generation, drying, cooking etc.
- CO4: Appreciate the need of Wind Energy and the various components used in energy generation and know the classifications.
- CO5: Understand the concept of Biomass energy resources and their classification, types of biogas Plants-applications
- CO6: Compare Solar, Wind and bio energy systems, their prospects, Advantages and limitations.
- CO7: Acquire the knowledge of fuel cells, wave power, tidal power and geothermal principles and applications.

#### Question paper pattern:

- The question paper will have ten full questions carrying equal marks.
- Each full question will be for 20 marks.
- There will be two full questions (with a maximum of four sub- questions) from each module.
- Each full question will have sub- question covering all the topics under a module.
- The students will have to answer five full questions, selecting one full question from each module.

Sl. No	Title of the Book	Name of the Author/s	Name of the Publisher	Edition and Year
<b>Textbook/s</b>				
1	Non-Convention Energy Resources	B H Khan	McGraw Hill Education (India) Pvt. Ltd.	3 <sup>rd</sup> Edition
2	Solar energy	Subhas P Sukhatme	Tata McGraw Hill	2 <sup>nd</sup> Edition, 1996.
3	Non-Conventional Energy Sources	G.D Rai	Khanna Publishers	2003
<b>Reference Books</b>				
1	Renewable Energy Sources and Conversion Technology	N.K.Bansal, Manfred Kleeman&MechaelMeliss	Tata McGraw Hill.	2004
2	Renewable Energy Technologies	Ramesh R & Kumar K U	Narosa Publishing House New Delhi	
3	Conventional Energy Systems	K M, Non	Wheeler Publishing Co. Ltd., New Delhi	2003

<b>AGRI BUSINESS MARKETING</b>			
Course Code	20MBAMM405	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>To provide a conceptual understanding on the Rural Marketing with special reference to Indian context.</li> <li>To create awareness about the applicability of the concepts, techniques and processes of marketing in rural context.</li> <li>To familiarize with the special problems related to sales in rural markets.</li> </ol>			
<b>Module-1 Introduction to Indian Rural Marketing</b>			<b>7 hours</b>
Scope of rural marketing, concepts, classification of rural markets, rural vs. urban markets. Rural marketing environment: Population, occupation pattern, income generation, location of rural population, expenditure pattern, literacy level, land distribution, land use pattern, irrigation, development programs, infrastructure facilities, rural credit institutions, rural retail outlets, print media in rural areas, rural areas requirement, rural demand and rural market index, problems in rural marketing.			
<b>Module -2 Rural Consumer behaviour</b>			<b>7 hours</b>
Consumer buying behaviour models, Factors affecting Consumer Behaviour, Social factors, Technological Factors, Economic Factors, Political Factors, Characteristics of Rural consumer-Age and Stages of the Life cycle, Occupation and Income, Economic circumstances, Lifestyle, Personality and Brand Belief, Information Search and pre-purchase Evaluation, Rise of Consumerism, Consumer Buying Process, Opinion Leadership Process, Diffusion of Innovation, Brand Loyalty. 60 Researching Rural Market: Sensitizing rural market, Research design-reference frame, Research approach, Diffusion of innovation, Development studies, PRA approach, The need for PRA, Sampling, Operational aspects of data collection.			
<b>Module -3 Rural Marketing of FMCG's</b>			<b>7 hours</b>
Rural Marketing of FMCG's: Indian FMCG industry, characteristics of Indian FMCG sector, Challenges in the FMCG industry, Rural Marketing of FMCG's: Select case studies Rural Marketing of Consumer durables: Issues related to consumer durables in the rural market, Rural Marketing of Consumer durables: Select case studies Rural marketing of financial services: Marketing objectives and approaches, Evolution of rural banking after independence, Challenges in marketing for banking services in rural, opportunities for banking in rural areas, marketing strategies for banking services.			
<b>Module -4 Marketing of agricultural inputs</b>			<b>5 hours</b>
Indian tractor industry: A brief overview, Challenges for Indian tractor industry, factors suggesting better future prospects for tractor industry, marketing strategies for tractor industry Fertilizer industry in India: Marketing of fertilizer industry, classification of fertilizer industry, Challenges for marketing of fertilizer industry, marketing strategies for fertilizer industry.			
<b>Module -5 Marketing of agricultural products</b>			<b>7 hours</b>
Profiling of Indian agricultural produces marketing, challenges in marketing of agricultural produce, Strategies to promote marketing of agricultural produce. Corporate sector in agri-business: Reasons for increased interest of corporate sector in agribusiness, opportunities in the agri-business, benefits of corporate driven agri-business system involvement of corporate sector in agri-business.			
<b>Module - 6 Distribution and Communication Strategy</b>			<b>7 hours</b>
<b>Distribution Strategy:</b> Introduction Accessing Rural Markets, Coverage Status in Rural Markets, Channels of Distribution, Evolution of Rural Distribution Systems- Wholesaling, Rural Retail System, Vans, Rural Mobile Traders: The last Mile Distribution, Haats/Shandies, Public Distribution System, Co-operative Societies Behaviour of the Channel, Prevalent Rural Distribution Models- Distribution Models of FMCG Companies, Distribution Model of Durable Companies, Distribution of fake products, Emerging Distribution Models- Corporate –SHG Linkage, Satellite Distribution, Syndicated Distribution, ITC's Distribution Model, Petrol pumps and Extension counters.			
<b>Communication strategy:</b> Challenges in Rural Communication, A view of Communication Process, Developing Effective- Profiling the Target Audience, Determining communication objectives, designing the message, selecting the communication channels, deciding the promotion mix, Creating advertisement for rural audiences			

**B. E. CIVIL ENGINEERING**  
**Choice Based Credit System (CBCS) and Outcome Based Education (OBE)**  
**SEMESTER - VI**

**ALTERNATE BUILDING MATERIALS**

Course Code	<b>18CV643</b>	CIE Marks	40
Teaching Hours/Week(L:T:P)	(3:0:0)	SEE Marks	60
Credits	03	Exam Hours	03

**Course Learning Objectives:** This Course will enable students to:

1. understand environmental issues due to building materials and the energy consumption in manufacturing building materials
2. study the various masonry blocks, masonry mortar and structural behavior of masonry under compression.
3. Study the alternative building materials in the present context.
4. understand the alternative building technologies which are followed in present construction field.

**Module -1**

**Introduction:** Energy in building materials, Environmental issues concerned to building materials, Embodied energy and life-cycle energy, Global warming and construction industry, Green concepts in buildings, Green building ratings – IGBC and LEED manuals – mandatory requirements, Rainwater harvesting & solar passive architecture. Environmental friendly and cost effective building technologies, Requirements for buildings of different climatic regions.

**Module -2**

**Elements of Structural Masonry :** Elements of Structural Masonry, Masonry materials, requirements of masonry units' characteristics of bricks, stones, clay blocks, concrete blocks, stone boulders, laterite Blocks, Fal- G blocks and Stabilized mud block. Manufacture of stabilized blocks.

**Structural Masonry Mortars:** Mortars, cementations materials, sand, natural & manufactured, types of mortars, classification of mortars as per BIS, characteristics and requirements of mortar, selection of mortar. Uses of masonry, masonry bonding, Compressive strength of masonry elements, Factors affecting compressive strength, Strength of Prisms/wallets and walls, Effect of brick bond on strength, Bond strength of masonry: Flexure and shear, Elastic properties of masonry materials and masonry, Design of masonry compression elements subjected to axial load.

**Module -3**

**Alternate Building Materials:** Lime, Pozzolana cements, Raw materials, Manufacturing process, Properties and uses. Fibers- metal and synthetic, Properties and applications. Fiber reinforced plastics, Matrix materials, Fibers organic and synthetic, Properties and applications. Building materials from agro and industrial wastes ,Types of agro wastes, Types of industrial and mine wastes, Properties and applications. Masonry blocks using industrial wastes. Construction and demolition wastes.

**Module -4**

**Alternate Building Technologies:** Use of arches in foundation, alternatives for wall constructions, composite masonry, confined masonry, cavity walls, rammed earth, Ferro cement and ferroconcrete building components, Materials and specifications, Properties, Construction methods, Applications.

Top down construction, Mivan Construction Technique.

**Alternate Roofing Systems:** Concepts, Filler slabs, Composite beam panel roofs, Masonry vaults and domes.

**Module -5**

**Equipment for Production of Alternate Materials:** Machines for manufacture of concrete, Equipments for production of stabilized blocks, Moulds and methods of production of precast elements, Cost concepts in buildings, Cost saving techniques in planning, design and construction, Cost analysis: Case studies using alternatives.

**Course Outcomes:** After studying this course, students will be able to:

1. Solve the problems of Environmental issues concerned to building materials and cost effective building technologies;
2. Select appropriate type of masonry unit and mortar for civil engineering constructions; also they are able to Design Structural Masonry Elements under Axial Compression.
3. Analyse different alternative building materials which will be suitable for specific climate and in an environmentally sustainable manner. Also capable of suggesting suitable agro and industrial wastes as a building material.
4. Recommend various types of alternative building materials and technologies and design a energy efficient building by considering local climatic condition and building material.

**Question paper pattern:**

- The question paper will have ten full questions carrying equal marks.
- Each full question will be for 20 marks.
- There will be two full questions (with a maximum of four sub- questions) from each module.
- Each full question will have sub- question covering all the topics under a module.
- The students will have to answer five full questions, selecting one full question from each module.

**Textbooks:**

1. KS Jagadish, B V Venkatarama Reddy and K S Nanjunda Rao, "Alternative Building Materials and Technologies", New Age International pub.
2. Arnold W Hendry, "Structural Masonry", Macmillan Publishers.

**Reference Books:**

1. RJS Spence and DJ Cook, "Building Materials in Developing Countries", Wiley pub.
2. LEED India, Green Building Rating System, IGBC pub.
3. IGBC Green Homes Rating System, CII pub.
4. Relevant IS Codes.

<b>AGRI BUSINESS MARKETING</b>			
Course Code	20MBAMM405	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>To provide a conceptual understanding on the Rural Marketing with special reference to Indian context.</li> <li>To create awareness about the applicability of the concepts, techniques and processes of marketing in rural context.</li> <li>To familiarize with the special problems related to sales in rural markets.</li> </ol>			
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<b>Module -3 Rural Marketing of FMCG's</b>			<b>7 hours</b>
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