ANNEXURE : 54 B
SCAA DT: 29.02.2008

ADVANCED POST GRADUATE DIPLOMA IN MANUFACTURING MANAGEMENT

(APGDMM)

(For Defence Officers only)

One Year Programme

1. The Programme: APGDMM programme will consist of 8 core subjects, 1 case study and 1 project work. (vide curriculum structure enclosed)
2. Duration: The programme consists of 2 semesters in one academic year. First semester will be for a period of 75 working days including internal examinations and 15 days for case study and the second semester will be 75 working days and 12 weeks project work at the end of the second semester.

July 1st to October 31st	-	I Semester
November 1st week	-	I Semester exams
November 15th – May 30th	-	II Semester
June 1st week	-	II Semester exams

3. **Attendance:** students who have secured at least 75%of attendance in a semester or who have obtained condonation of shortage of attendance will be eligible to appear for the examination of that semester. The competent authority may condone shortage of attendance up to 10%.
4. **Course continuation:** students who have secured the required attendance as stated in the Para 3. will be permitted to proceed into the subsequent semester. Those who fail to secure the required attendance shall seek readmission into the same semester during the subsequent year.
5. **Continuous Internal assessment:** The performance of students in each subject will be continuously assessed by the respective teachers.
6. **External Examination:** External examination will be held at the end of each semester for the duration of 3 hours of each subject.
7. **Passing Minimum:** There is no passing minimum for internal assessment component. The passing minimum fir the external exam is 50% and the overall passing minimum putting the sessional and external examination marks together will be 50%.
8. (a) **Case Study:** A participant registered for this course must take a real life case of relevance to his interest and having relevance to his future engagement. He has to write a case, undertake an informed analysis, and prepare case notes for conducting the case. The case study should contribute towards implementation of Case Method of Instruction (CMI) by generating case studies with contemporary relevance and depicting real life problem faced by the environment.

   (b) **Internship Project Work:** Students will do a project work for 12 weeks at the end of the second semester. A report of the project work should be submitted to the concerned HOD at the end of the internship. Viva-voce examination will be conducted after submission of the report. Students who fail in the project work and viva-voce or who were absent for the project viva voce examination can take up the viva-voce during the subsequent semester. When the faculty guide is not present on that date of viva-voce examination the HOD will act as the examiner on behalf of the faculty guide. The two examiners will jointly evaluate the project report and the viva-voce.

9. **Pattern of question paper:** As per the University norms.

I SEMESTER	
1	Organisational Behaviour and Management
2	Decision Analysis
3	Project Management
4	Industrial Management and Strategy
5	Case Study
II SEMESTER	
1	Human Resource Management
2	Information Systems Management
3	Quality Management Systems
4	Supply Chain Management
5	Project Work

Case Study:

A paradigm shift in the method of imparting management training has been achieved by adopting CMI (Case Method of Instruction) as the primary mode of instruction. This method is very effective in enhancing decision making and problem solving skills. The case method is found to enable easier retention of the knowledge gained and gives considerable attention to situational factors and practical knowledge.

A participant of this course must take a real life case of relevance to his interest and having relevance to his future engagement. He has to write a case, undertake informed analysis, and prepare case notes for conducting the case. The case study should contribute towards implementation of CMI by generating case studies with contemporary relevance and depicting real life problem faced by the environment.

Project Work:

A participant registered for this course must take a real life problem of relevance to his interest and having relevance to his future engagement. He has to spend six weeks in the industry, undertake the study and prepare an analysis. A dissertation should be submitted at the end of the six weeks.

Eligibility for APGDMM:

1. Candidates should possess a Bachelor's Degree of Bharathiar University or any other recognized University as equivalent there to by the Bharathiar University.
2. Candidates should be Commissioned rank in the Armed Forces / Defence Services of India.

Subject Title : Organizational Behaviour and Management
Course Number :
Number of Credit Hours : 3 (Three)

Subject Description:

This course presents the basic principles of management, emphasizing the managerial functions, internal management of organizations and behavioural concepts as applied to practical management problems.

Goals

To enable the student to learn the basic functions, principles and concepts of management and organizational behaviour.

Objectives

On successful completion of the course the students will be able to understand
1. management functions and principles
2. the scientific decision making process
3. the basics of behaviour of individuals and groups in organizations and the role of the manager in leading organizations in the global era.

UNIT I
Meaning and nature of management; Management systems and process; Tasks and responsibilities of a professional manager, Managerial skills; Evolution of management thought and organizational behaviour – Basic managerial functions and their relevance to the field of organization behaviour.

UNIT II
Organization structure, processes, design, climate and culture; Management ethos; Social responsibility and ethics; Nature of Planning – objectives, strategies, policies & premises; Nature of organizing and Entrepreneuring Departmentalization – Line / Staff Authority and decentralization.

UNIT III
Behavioral dynamics; Individual determinants of organization behaviour, Co-ordination & Controlling functions; Perceptions, learning, personality, attitudes and values, Emotions, Motivation; Stress and its management; Concept of personality; Personality theories; Emotional intelligence for Leaders.

UNIT IV
Interactive aspects of organizational behaviour, Group Dynamics; Learning – theories & implications for managerial performance; Communication – organizational communication and process – Conflict management strategies for managers – Organizational change and management.

UNIT V
Leadership styles and theories; Foundations of group behavior; Effective team building; Decision making and creativity in teams; Effective team management; Need for global managers, Challenges for managers in the global era.

Reference Books:

1. Robbins (4th ed.), "Essentials of organizational behaviour", Prentice Hall of India Pvt Ltd., New Delhi, 1995.
2. McShane & Glinow, Organizational Behaviour, Tata McGraw Hill.
3. Hersey and Blanchard (6th ed.), "Management of organizational behaviour: utilizing human resources", Prentice Hall of India Pvt. Ltd., New Delhi, 1996.
4. Arnold, John, Robertson, Ivan t. and Cooper, Cary, l., "Work psychology: understanding human behaviour in the workplace", Macmillan India Ltd., Delhi, 1996.
5. Uma Sekaran, Organizational Behaviour, Tata McGraw Hill, 2004.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Decision Analysis
Course Number :
Number of Credit Hours : 3 (Three)

Subject Description:

This course deals with the application of quantitative techniques and mathematical models to the practice of management and decision making.

Goals:

To enable the students to learn the use of quantitative techniques in managerial decision making.

Objectives:

On successful completion of the course the students will be able to understand
1. the use of mathematics and statistics in management
2. to apply various mathematical models to problem solving
3. to use statistical tools and models to solve various issues in management.

UNIT I
Linear and non-linear functions; Graphical representation of functions; Constants and variables; Notation of mathematical models and constraints; Introduction to probability; Theoretical probability distributions – Binomial, Poisson and Normal, business oriented problems; Data Analysis: Uni-variate, Bi-variate – correlation and regression, business oriented problems.

UNIT II
Mathematical Programming Models: Linear programming; General form of linear programming; Properties; Formulation of linear models; Graphical representation and method; Simplex algorithm, Constraint transformation; Duality and its interpretation; Sensitivity analysis.

UNIT III
Transportation problem: Linear programming for transportation; North-west corner method, Least-cost method; Vogel's a approximation method; U-V method; Stepping stone method; Fixed charge transportation; Assignment problem: Linear programming for assignment; Hungarian method;

UNIT IV
Queuing theory – introduction to queuing system, components, principal queue parameters; Little's law and Erlang's loss formula; Introduction to M/M/1 queues and simple problems; Simulation – appropriation, advantages, disadvantages, steps in simulation study, examples of systems and components, areas of application, types, simple problems.

UNIT V
Decision Theory – Psychology behind the decision theory; Creation of payoff tables; Types of decision criteria; Decision tree; Expected value of perfect information Multi attribute utility theory; Game theory – Fundamentals and Two person zero sum game.

Reference Books:

1. Richard 1 Levin & David S. Rubin, Statistics for Management, PHI, 7th Edition, 2004.
2. Hillier, Frederick S. Liberman, Gerald J, Introduction to Operations Research (IBM), McGraw-Hill College. 8th Edition, 2005.
3. A. Ravindran, Don T. Philips, James J. Solberg, Operations Research: Principles and Practice, Wiley Publishers, 2nd Edition.
4. Prem Kumar Gupta, D.S.Hira, Operations Research, S.Chand & Company Ltd, First edition, reprint 2003 edition.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Project Management
Course Number :
Number of Credit Hours : 3 (Three)

Subject Description:

This course presents the steps involved in project management, right from concept to completion using various quantitative tools as a support mechanism.

Goals:

To enable the students to learn the basics and steps in the process of managing projects.

Objectives:

On successful completion of the course the students will be able to understand
1. to plan and execute projects
2. to use various tools to optimize project costs
3. to decide on investment choices available and manage risk
4. to use software to generate MIS to keep the project on track.

UNIT I
Need and basic steps for project management; Project life cycle; Project integration management – project plan development, execution and integrated change control; Project scope management – initiation, scope planning, definition, verification and change control; Project work structure – project charter – statement of work, responsibility matrix, estimation of work packages – work breakdown structures and its types.

UNIT II
Activity definition and sequencing; Network representation and diagrams – activity on node and arrow and precedence / inter relationships; Project activity parameter estimation techniques; Delphi analysis; Network analysis – critical path method, float calculations, program evaluation review technique (PERT) and graphical evaluation review technique (GERT); Resource planning, leveling and smoothening.

UNIT III
Project cost estimation – time value of money, operating revenue estimation, ratio analysis, break even analysis, social cost benefit analysis and profit analysis; Project performance monitoring – measuring schedule and cost variance and earned value approach; Project time-cost analysis – network crashing.

UNIT IV
Project appraisal – market appraisal, technical appraisal and finance appraisal; Capital budgeting; Factors affecting capital investment decisions; Investment evaluation; Cost of capital – weighted average cost of capital and capital asset pricing model; Project risk management – risk planning and identification, qualitative and quantitative risk analysis and risk response and control.

UNIT V

Project quality management – quality function deployment; Project procurement management – procurement and solicitation planning, selection method – analytic hierarchy process and contract administration and close-out. Project management Information systems – MIS requirements – MS-Project software – International project management – Current and Future trends in project management.

Reference Books:

1. A guide to the project management body of knowledge (PMBOK Guide), Project Management Institute, 200 Edition.
2. Meredith and Mantel, Project Management – A Managerial approach, John Wiley and sons, 5th edition, 2003.
3. Prasanna Chandra – Project Planning: Analysis, Selection, Implementation and Review – Tata McGraw Hill Publishers, 5th Edition.
4. Eric Verzuh – The Fast Forward MBA in Project Management, Wiley Publishers, 2nd Edition.
5. The implementation of project management, Project Management Institute, Addison Wesley, 1982.
6. Clifford F.Gray and Eric W.Larson, Project Management – The managerial process, TataMc Graw Hill Publishers.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Industrial Management and strategy
Course Number :
Number of Credit Hours : 3 (Three)

Subject Description:

This course presents the various aspects of production and operations management right from choosing the location to managing quality.

Goals:

To enable the students to understand the various issues in setting up of production facilities and managing them.

Objectives

On successful completion of the course the students will be able to understand
1. the different types of production systems
2. to decide on locating and planning the layout of facilities
3. to manage inventory and optimize the use of facilities
4. the best practices in manufacturing across the globe.

UNIT I
Introduction, relationship and types of production systems, Process versus product matrix; Process and product design; Direct means of rising productivity; Work study: Method study – procedures, outline process chart and flow process charts; Time study; Motion study; Work measurement; Work sampling; Ergonomics – principles of motion economy.

UNIT II
Facilities planning: Facility location – location rating factor technique, center-of-gravity technique and load-distance method; Facility layout – Automated layout design program (ALDEP), computerized relationship layout planning (CORELAP), Computerized relative allocation of facilities (CRAFT) and Wimmert's Method.

UNIT III

Forecasting – moving average, exponential smoothening and least-squares fit; Material requirements planning – bill of material; Aggregate production planning – linear programming model and transportation model; Manufacturing resource planning (MRP II), Just-in-Time system – steps and layout; Kanban – optimal number of kanban.

UNIT IV
Inventory Management – types of inventory and its costs; Safety stock; Economic order quantity; Deterministic inventory models – continuous demand instantaneous replenishment model with backordering, production consumption model with backordering and model with discount.

UNIT V
Line balancing – sort by number of preceding operations and ranked positional weight; Lean production – value stream mapping; Theory of constraints; Flexible manufacturing systems; Synchronous manufacturing and cellular manufacturing – production flow analysis, rank order clustering and similarly based method; Computer integrated manufacturing system and computer aided design.

Reference Books:

1. Roberto Russell and Bernard W.Taylor III, Operations Management, John Wiley and Sons, Inc Publishers, 5th Edition.
2. Richard Chase, F. Robert Jacobs and Nicholas J. Aquilano, Operations Management for Competitive Advantage, Irwin/McGraw-Hill Publishesr, 10th edition.
3. R. Paneerselvam, Production and Operations Management, Prentice hall of India, 2nd Edition.
4. Seetha Rama L.Narasimhan, Dennis W.Mcleavey, Production planning and inventory control, Prentice Hall
5. Roberta S.Russell and Bernard W. Taylor, Operations management, Prentice Hal of India, 2003.
6. Nair N.G. Production and Operations management, Tata McGraw Hill

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Human Resource Management
Course number :
Number of Credit Hours:
Subject Description :

This course presents the human resource management relationship between labour relation and employee security.

Goals:

To enable the students to learn about the recruitment, labour relations and compensation.

Objectives:
On successful completion of the course the students will be able to understand
1. the human resource behavior
2. the impact of job satisfaction.
3. the labour relations and job analysis

Contents:

UNIT I
Essentials of HRML: Definition of HRM; Objectives, scope and functions of HRM; HRM Philosophy; Strategic HRM, Challenges and trends in HRM, Line and staff functions, Role of HR manager.

UNIT II
Job analysis Job description – job specification – skills inventory – Human Resource Planning: Factory affecting HRP – Planning process. Recruitment Policy, sources and methods; Selection: selection policy and process – IT and recruitment – promotion and transfers.

UNIT III
Orientation and Training: Training process – training techniques – E-learning – Development: Management development methods – evaluation – Performance appraisal: process – methods – performance review – career planning and development.

UNIT IV
Employee remuneration: components of remuneration – factors influencing remuneration – wage policy in India – Incentive Payments: types of incentive schemes – practices in Indian organization – Benefits and Services: statutory and voluntary benefits – fringe benefits – insurance benefits – retirement benefits and other welfare measures.

UNIT V
Industrial relation: Trade union – collective bargaining – discipline – grievances handling – managing separation and dismissals – Labour welfare measures – Health – Safety; HR audit – HR information system – HR accounting – Future of HRM.

Reference Books:

1. Garry Dessler, Human Resource Management, Prentice Hall of India.
2. Wendell French, Human Resource Management, Prentice Hall of India.
3. N.G. Nair and Latha Nair, Human Resource Sultan Chand & Sons.
4. VSP. Rao, Human Resource Management: Text and Cases, Excel books, New Delhi.
5. K. Aswathappa, Human Resource and Personnel Management, The Mc.Graw Hill companies.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Information Systems Management
Course Number :
Number of Credit Hours : 3 (Three)

Subject Description:

This course presents the various aspects of information systems as applicable to organizations and how information technology can be leveraged to manage organizations.

Goals:

To enable the students to appreciate and understand the role of information technology and information systems in a manufacturing organization.

Objectives:

On successful completion of the course the students will be able to understand
1. the basics of information management
2. how to apply and leverage information technology to manage a manufacturing facility
3. the use of ERP to and other techniques to make organizations more efficient.

UNIT I
Information system concepts and types; Computer software, peripherals and operating system; Introduction to database management systems – basic concepts, environment and tools, Commands, functions, operators, and data types; Table definition and modification; Sorting and indexing, Loops and control structures; Storage and output operations.

UNIT II
Architecture of databases; Data presentation and data models; Logical level. Storage structure and access techniques; Normalization; Functional dependency; Data independence, integrity, dictionary and directory; ER diagrams; Information systems in business and management; Transaction processing system; Executive information system; Decision support system; Expert system.

UNIT III
Information systems for manufacturing; Production information systems, Computerized production scheduling; Online production control systems; Computer based production management system; Enterprise resource planning – basic concepts and modules; Introduction to ERP software – Systems development – methods – SDC – CASE tools – prototyping and RAD.

UNIT IV
Data mining, kinds of data mining problems; Association rule extraction – Market basket analysis and Apriori algorithm; Classification – regression, decision tree classifier and artificial neural-networks, Clustering – k-means and k-medoids clustering; prediction techniques; Decision tress with chi-square automatic interaction detector. Text mining; Web mining – cart abandonment; rate; Path analysis, Recency-Frequency-Monetary (RFM) analysis; Data-warehousing.

UNIT V

Telecommunications and Networking; components and functions – types of telecommunication network – EDI – Internet: capabilities, benefits and problems – Enterprise wide computing – Introduction to electronic business. E-business technologies – internet, security, payment and architecture, Consumer-oriented and intranet e-business; Economics and strategies of e-business.

Reference Books:

1. James A.O. Brien, Management Information Systems – A Managerial End User Perspective, Tata McGraw Hill.
2. Michael Berry and Gordon Linoff, Data Mining Techniques for Marketing, Sales and Customer Support, John Wiley.
3. Ferric Whipple, Building an intelligent E-business, Prentice Hall of India.
4. Kenneth C. Laudon and Jane P.Laudon, Management Information Systems – organization and technology, 8th edition, Prentice Hall of India.
5. Effy oz, Management Information Systems, Vikas, 3rd edition.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Quality Management Systems
Course Number :
Number of Credit Hours : 3 (Three)

Subject Description:

This course presents the various quality issues in a manufacturing set up and how quality management techniques can be used to improve the quality of the output of the organization.

Goals:

To enable the students to understand the need and application of quality systems in organizations.

Objectives:

On successful completion of the course the students will be able to understand
1. the importance of quality in any manufacturing organization
2. to apply statistical tools and techniques to control quality of processes and products of the firm
3. the effect maintenance on quality
4. the role of human resources in producing quality products
5. the contemporary quality standards used the world over.

UNIT I
Quality – meaning and importance; Principles of quality gurus; Quality improvement techniques – pareto diagrams, cause-effect diagrams, scatter diagrams and run charts; Statistical concepts – definitions, measures of central tendency, measure of dispersion, concepts of population and samples and normal curves; Costs of quality; Process variation – Basic forms and taguchi's view of variation.

UNIT II
Statistical process control charts – p chart, np chart, X-bar chart, R chart, S chart and c chart; Process capability index; Accepting sampling – single sample plan, sequential sampling plan, producer and consumer risk, operating characteristic curve and double sampling plan; Design of experiments – Two level experiments, orthogonal array, grand mean effect, effect of the factors, repetition error effect, determining significant factors and optimum results.

UNIT III
Quality loss function; Taguchi loss function; Types of quality loss function; Robust design process: Parameter design process; Parameter optimization experiment; Experimental approaches – one-factor-at-a-time experiment, full and fractional factorial experiment; Analysis of mean (ANOM) and Analysis of variance (ANOVA), Failure mode and effect analysis.

UNIT IV
Reliability – definition and concepts; Product life characteristic curve – bath tub curve; Reliability function, Reliability engineering; Total quality management – principles and practices; Customer satisfaction; Total employee involvement; Total production maintenance; Quality assurance; Quality circle, Quality audit – world class standards.

UNIT V

Quality standards: ISO 9000 : 2000 – concepts, various procedures/clauses, certification requirements, implementation of ISO 9000 in Indian business environmental; IS 14000 – concepts and importance; Six sigma; Service quality measurements – SERVQUAL and national and international standards.

Reference Books:

1. Douglas C. Montgomery, Introduction to Statistical Quality Control, 4th edition.
2. Donna C.S. Summers, Quality, Prentice-Hall, 2006, 4th Edition.
3. Roger W.Berger and Thomas Pyzdek, Quality engineering, Handbook, Tata McGraw Hill.
4. Amitava Mitra, Fundamentals of Quality control and improvement, Prentice Hall, 2005.
5. Dale H.Besterfield and Carol Besterfield, Total Quality Management, Prentice Hall, 2005.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

Subject Title : Supply Chain Management
Course Number :
Number of Credit Hours : 3 (Three)
Subject Description:

This course presents the concept of supply chain and its components. It also helps understand supply chains have a big role to play in the success of organizations of the information era.

Goals:

To enable the students to understand the importance of supply chain management in manufacturing organizations.

Objectives:

On successful completion of the course the students will be able to understand
1. the concept of supply chains in business
2. how supply chains are customer oriented
3. how supply chains use information technology and systems to reduce inventory and keep cost low
4. how logistics plays a major role in supply chains.

UNIT I
Introduction Concept of supply chain management – Objectives and functions of SCM – logistics management, logistics to SCM, conceptual framework of SCM, Supply chain strategy, operating model for supply chain, balanced business score and framework.

UNIT II
Customer focus in Supply Chain Alignment theory – Competitive situation – developing customer service strategy – value chain and value delivery system for SCM.

UNIT III
Inventory management in supply chain as an element of customer service – transportation in supply chain – factors affecting transport selection – formulating supply chain strategy – strategic development criteria – logistics implications – channel design and management – development of integrated logistics strategy.

UNIT IV
Strategic partnership and alliances – collaborative strategy – strategic relationship in logistics – problems of complexity confronting supply chain management – The role of modeling – Measuring service levels in supply chain – composite service index – critical value analysis – Electronic Data Interchange – Distribution resource planning – Intranet extranet bar coding.

UNIT V
Organization design and management of supply chain – customer led business – developing the logistics organization for effective supply chain management – issues in labour management and labour relations – retailing and supply chain interface – managing the external supply chain – managing internal supply chain – logistics in maximizing profitability and cash flow – organizational design requirements for retail supply chain management.

Reference Books:

1. Sinchi D.Levi, Kaminsky Philip and sim chi – levi. E: Designing and management of the supply chain, McGraw Hill, 2000.
2. Gattorna JL and Walters DW: Managing the supply chain, Macmillan Business, 1996.
3. Martin Christopher: Logistics and Supply Chain Management, Person Education Asia, 2000.
4. B.S. Sahajay: Supply Chain Management for Global Competitivenss, Macmillan Indian Ltd, 1999.
5. Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies, Second Edition, David Simchi-Levi, Philiop Kainsky, and Edith Simchi-Levi, McGraw-Hill/Irwin, New York, 2003.
6. Sunil Chopra and Peter Meindel. Supply Chain Management: Strategy, Planning, and Operation, Prentice Hall of India, 2002.

Equipments/Softwares and other teaching aids and tools: Computer, LCD Projector, OHP, PowerPoint slides

Preferable Method of Teaching: Lectures and Case Study

Suggested components for evaluation for internal: Internal Test, Assignment and Seminar

Suggested contact hours required for teaching: 45 Hours

QUESTION PAPER PATTERN

Time : 3 Hours **Max Marks : 75**

SECTION – A (10 X 1= 10 Marks)

Answer all questions. (Ojective type of questions with no choice.
(10 questions – 2 each from every unit)

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

SECTION – B (5 x 5 = 25 Marks)

Answer all questions. (Short answer questions of either / or type)
(5 questions – 1 each from every unit)

1. a or b
2. a or b
3. a or b
4. a or b
5. a or b

SECTION – C (5 x 8 = 40 Marks)

Answer all questions (Essay-type questions of either / or type
(5 question – 1 each from every unit)

1. a or b
2. a or b
3. a or b
4. a or b
5. a or b
