

**BHARATHIAR UNIVERSITY: COIMBATORE 46**  
**CENTRE FOR COLLABORATION OF INDUSTRY AND INSTITUTION (CCII)**  
**MBA AVIATION MANAGEMENT**  
**(For The CCII students admitted from the academic year 2014-15 and onwards)**

**Scheme of Examinations – CBCS Pattern**

Course Title		Hrs/ Week	Duration	Marks			Credits
				INT	EXT	Total	
<b>SEMESTER-I</b>							
1.1	Management Principles and Practice	5	3	25	75	100	4
1.2	Airline and Airport Management	5	3	25	75	100	4
1.3	Airline Operation and Scheduling	5	3	25	75	100	4
1.4	Organizational Behavior	5	3	25	75	100	4
1.5	Corporate Communication	4	3	25	75	100	4
1.6	International Business	4	3	25	75	100	4
1.7	Practical Using SAP	2	-	-	-	-	-
<b>SEMESTER-II</b>							
2.1	Human Resource Management	5	3	25	75	100	4
2.2	Business ethics and Global Business Environment	5	3	25	75	100	4
2.3	Aviation Advertising and Sales promotion	5	3	25	75	100	4
2.4	Quantitative Methods for Management	5	3	25	75	100	4
2.5	Aviation Finance	4	3	25	75	100	4
2.6	Total Quality Management	4	3	25	75	100	4
2.7	Practical Using SAP	2	3	40	60	100	4
<b>SEMESTER-III</b>							
3.1	Customs Procedures	6	3	25	75	100	4
3.2	Airline Marketing Management	6	3	25	75	100	4
3.3	Aircraft Rules & Regulations C.A.R. 1& II	6	3	25	75	100	4
3.4	Research Methodology	6	3	25	75	100	4
3.5	Customer Relation Management	4	3	25	75	100	4
3.6	Field Practical	2	3	40	60	100	4
<b>SEMESTER-IV</b>							
4.1	Aircraft Maintenance Management	5	3	25	75	100	4
4.2	E- Commerce	5	3	25	75	100	4
4.3	Strategic Management	5	3	25	75	100	4
4.4	Operation Management	5	3	25	75	100	4
4.5	Project Work & Viva.		3			200*	8
<b>TOTAL</b>						<b>2500</b>	<b>100</b>

\*Project work and Viva-voce : for Project work 80% Marks and Viva-Voce 20% marks

## I- SEMESTER

### 1.1 MANAGEMENT PRINCIPLES AND PRACTICE

**Unit I :** Management : Science, Theory and Practice - The Evolution of Management Thought and the Patterns of Management Analysis - Management and Society : The External Environment, Social Responsibility and Ethics - Global and Comparative Management - The Basis of Global Management.

**Unit II :** The Nature and Purpose of Planning - Objectives - Strategies, Policies and Planning Premises - Decision Making - Global Planning.

**Unit III :** The Nature of Organizing and Entrepreneurship - Organizational Structure : Departmentation - Line/Staff Authority and Decentralization - Effective Organizing and Organizational Culture - Global Organizing.

**Unit IV :** Co-ordination functions in Organisation - Human Factors and Motivation - Leadership - Committees and group Decision Making - Communication - Global Leading.

**Unit V :** The System and Process of Controlling - Control Techniques and Information Technology - Productivity and Operations Management - Overall Control and toward the Future through Preventive Control - Global Controlling and Global Challenges.

#### References :

1. Koontz & Weirich, Essentials of Management, Tata McGraw Hill.
2. VSP Rao, V Hari Krishna – Management: Text and Cases, Excel Books, I Edition, 2004
3. Stoner & Wankai, Management, PHI.
4. Robert Krcitner, Management, ATTBS.
5. Weirich & Koontz, Management - A Global perspective, McGraw Hill.
6. Helliregarl, Management, Thomson Learning, 2002.
7. Robbins.S.P., Fundamentals of Management, Pearson, 2003.

## **1.2 AIRLINE AND AIRPORT MANAGEMENT**

### **UNIT- I INTRODUCTION**

Evolution of Management – History of Aviation – Organization, Global, Social, and Ethical Environment – History of Indian Airline Industry – Major Players in Airline Industry – SWOT analysis in Airline Industry- Market potential on Indian Airline Industry- Current Challenges in Airline Industry- Completion in Airline Industry

### **UNIT- II AIRPORT MANAGEMENT**

Airport Planning – Terminal planning, design and operation – Airport Operations – Airport Functions – Organization Structure of Airline sectors – Airport Authorities – Global and Indian scenario of Airport Management

### **UNIT- III AIR TRANSPORT SERVICES**

International Trends – Emerging Indian Scenario – Private Participation: International Developments- Private Participation in Indian Airports – Environmental regulations – Regulatory Issues – Meteorological Services in Aviation – Airport fees, rates and charges

### **UNIT- IV INSTITUTIONAL FRAMEWORK**

Roll of DGCA – slot allocation methodology followed by ATC and DGCA - Safety Regulation – Economic Regulation – Management of Bilateral – Aviation Security - Importance of Air Transportation Safety and Security-Airport- Airways- Terrorism- Hijacking – Security measures- Airport Security Programmed a Steps taken to Contend with Hijacking- Transportation security administration – International aviation safety assessment program

### **UNIT- V CONTROLLING**

Traffic Control – Airspace and Navigational aids – Controlling Process – Coordination - Response to emergencies and airport securities – 6 Case Studies in Airline Industry

### **TEXT BOOKS**

1. Graham.A. Managing Airports: An International Perspective – Butterworth – Heinemann, Oxford 2001
2. Wells.A. Airport Planning and Management, 4th Edition McGraw- Hill, London 2000

### **REFERENCES**

1. Doganis. R. The Airport Business Routledge, London 1992
2. Alexender T. Wells, Seth Young, Principles of Airport Management, McGraw Hill 2003
3. P S Senguttavan Fundamentals of Air Transport Management, Excel Books 2007
4. Richard de Neuffille, Airport Systems: Planning, Design and Management, McGraw-Hill London 2007

## **1.3 AIRLINE OPERATION AND SCHEDULING**

### **UNIT- I OPTIMIZING FLOW OF NETWORKS**

Airline Schedule Planning – links to operations - Time space networks – Constrained Shortest Path - Multi Commodity Flow Models – Column and Row Generation Techniques – Branch and Bound – Branch and Price cut – Computational Exercises – Passenger Mix Model

### **UNIT -II FLEET ASSIGNMENT PROBLEM**

Basic Models and Solutions - Approaches – Shortcomings Itinerary based Fleet Assignment Model – Sub network based Fleet - Assignment Model and Solution Approach – Fleet Assignment Model Extensions

**UNIT- III CREW SCHEDULING**

Crew pairing problem – Bidline Generation/ Rostering - Crew Pairing problem Models and solutions - Branch on Follow ons - Review of Results of Barnhat – Aircraft Routing Problem Models – Solutions – Approaches – Constrained Shortest Path – Branch and Price – Integrated Crew Paring – Aircraft routing

**UNIT- IV OPERATIONS RECOVERY**

Overview of Operation Control Centre – Aircraft Passenger Delays – Flight Postponement and Cancellation Model–Airline Operation Recovery – Challenges- – Role of Simulation

**UNIT- V ROBUST SCHEDULING**

Robust Crew Scheduling – Crew Schedule Evaluation- Disruption Scenario Generation - Robust Aircraft Routing - Degradable Schedule Design; -preventing delays-minimizing the delays and disruption – maximizing recovery flexibility- Isolating delays and disruption – minimizing the expected cost of a schedule- Robust schedules by schedule planning Phase – performance metrics for Airline schedules

**TEXT BOOKS**

1. Barnhart, C., F. Lu, and R. Shenoi. “Integrated Airline Scheduling.” In Operations Research in the Air Industry.

**REFERENCES**

1. Barnhart, C., and K. Talluri. “Airline Operations Research.”
2. Chebalov, S., and D. Klabjan. “Robust Airline Crew Scheduling: Move-up Crews.”

**1.4 ORGANISATIONAL BEHAVIOUR**

**Unit I :** Organisational Behaviour : History - evaluation, Challenges & opportunities, contributing disciplines, management functions and relevance to Organisation Behaviour. Personality - Determinants, structure, behaviour, assessment, psycho-analytical social learning, job-fit, trait theories.

**Unit II :** Emotions and Emotional Intelligence as a managerial tool. Implications of EI on managers and their performance. Attitudes - relationship with behaviour, sources, types, consistency, work attitudes, values - importance, sources, types, ethics and types of management ethics. Perception - Process, Selection, Organisation Errors, Managerial implications of perception. Learning - classical, operant and social cognitive approaches. Implications of learning on managerial performance.

**Unit III :** Stress - Nature, sources, Effects, influence of personality, managing stress. Conflict - Management, Levels, Sources, bases, conflict resolution strategies, negotiation. Foundations of group behaviour : linking teams and groups, Stages of development Influences on team effectiveness, team decision making. Issues in Managing teams.

**Unit IV**

Organisational change - Managing planned change. Resistance to change - Approaches to managing organisational change - Organisational Development - values - interventions, change management - Organisational politics - Political behaviour in organisation, Impression management, Self-monitoring.

Organisational culture - Dynamics, role and types of culture and corporate culture, ethical issues in organisational culture, creating and sustaining culture.

**Unit V :** Organisational Behaviour responses to Global and Cultural diversity, challenges at international level, Homogeneity and heterogeneity of National cultures, Differences between countries, The Challenges of work force diversity and managing diversity Cases.

**References :**

1. Robbins.S. Organisational Behaviour, X edn., Prentice-Hall, India.
2. Hellinegal Slocum, Woodman, Organisational Behaviour, IX edn., Thomson learning.
3. Umasekaran, Organisational Behaviour, Tata McGraw Hill.
4. Robbins S.P., Concepts contrivances and applications, Prentice Hall.
5. Umasekaran, Organisational Behaviour.
6. Helliregal.et.al, Organisational Behaviour, Thomson Learning.
7. McShane & Glinow, Organisational Behaviour, Tata McGraw Hill.
8. Harris & Hartman, Organisational Behaviour, Jaico, 2003.

## 1.5 CORPORATE COMMUNICATION

**Unit - I:** Communication basics – Business Communication – components – Types – formal communication network – Work team communication – variables – goal – conflict resolution – non – verbal communication – Cross cultural communication – Business meetings – Business Etiquette.

**Unit - II:** Understanding Corporate Communication – Employee Communication – Managing Government Relations – Writing for Media and Media Relations

**Unit - III:** Corporate Communication in Brand Promotion – Financial Communication – Crises Communication.

**Unit - IV:** Report writing: Characterizing & business reports – Types and forms & reports – Project proposals – collection of data – tables constitution – charts – writing the report – documenting the sources – proof reading.

**Unit - V:** Business Presentation: Written and oral presentation – work – team presentation – Delivering the business presentation visual aids – slides – electronic presentation – hand-outs – delivering the presentation – career planning – preparing Resume – job applications – preparation for a job interview – employment interviews – follow-up.

**Reference :**

1. Scot Ober, Contemporary business communication, fifth edition, biztantra.
2. Lesiler & Flat lay, Basic Business communication. Tata Mc Graw Hill.

## 1.6 INTERNATIONAL BUSINESS

**UNIT -I**

AN OVERVIEW OF INTERNATIONAL TRADE - Merchandise trade; trade in services; global sourcing; counter trade; global trade and developing countries theories of international trade - Mercantilism; absolute cost theory; comparative cost theory; opportunity cost theory; factor endowment theory; complementary trade theories-Stopler-samuelson theorem; intra-industry trade; economies of scale; different tastes; technological gaps and product life cycles; availability and non-availability ; trade in intermediate goods; Dutch disease; Transportation cost and international trade – competitive advantage of nations.

GAINS FROM TRADE AND TERMS OF TRADE - Gains from trade: terms

**UNIT-II**

TRADE POLICY (FREE TRADE VERSUS PROTECTION - Arguments for free trade; arguments for protection; demerits of protection; trade barriers; non-tariff barriers; REGIONAL ECONOMICS INTEGRATION (TRADE BLOCS) AND CO-OPERATION.

Types of integration; European Union; EU trade; other regional groupings; economics integration of developing countries ; south-south co-operation ; SAARC; SAPTA; indo-Lanka Free Trade agreement; INTERNATIONAL COMMODITY AGREEMENTS, CARTEL AND STATE TRADING - Commodity agreements-quota agreements; buffer stock agreements –cartels; states trading; bilateral/ multilateral contracts BALANCE OF PAYMENTS - Components of balance of payments; balance of disequilibrium; correction of balance of payments disequilibrium; financing of BOP deficit INTERNATIONAL MONETARY SYSTEM - Pre-Bretton Woods Periods; Bretton Woods system; managed floating;

**UNIT -III**

BALANCE OF PAYMENTS - EMS, ECU and Euro. FOREIGN EXCHANGE MARKET - Meaning nature & functions; determination of exchange rates; purchasing power parity theory; balance of payments theory ;exchange control; exchange rate systems; exchange rate classification ; convertibility of rupee; devolution ; currency exchange risks and their management ;foreign Exchange Management Act (FEMA). EURO CURRENCY MARKET - Meaning and scope; important features of the market; origin and growth; factors that contributed to the growth; supply and demands; an evaluation of the Eurocurrency market. INTERNATIONAL FINANCIAL AND DEVELOPMENT INSTITUTIONS - International Monetary Fund; Special Drawing Rights (SDRs); IMF and international liquidity; World Bank; International Development Association.

**UNIT-IV**

World Bank assistance to India; an evaluation of IMF – World Bank; International Finance Corporation; Asian Development Bank; UNCTAD; UNIDO; International Trade Centre; WORLD TRADE ORGANIZATION (WTO) - GATT; the Uruguay Round; World Trade Organization; salient features of UR agreement; GATS; TRMs; TRIPs; patents; dispute settlement; anti – dumping measures; an evaluation of UR agreement; UR agreement and development countries; UR agreement and India. International Investments - Types of foreign Investment; significance of foreign investment; limitations and dangers of foreign capital; factors affecting international investment; growth of FDI; dispersion of foreign investment; portfolio investment; cross- border M & As; foreign investment in India; the New policy;

**UNIT-V**

FII investments; Euro / ADR issues, mergers and acquisitions; foreign investment by Indian Companies MULTINATIONAL CORPORATIONS (MNCs) - Definition and meaning; importance and dominance of MNCs; code of conduct; multinationals in India- GLOBALISATION - Meaning and dimensions; stages of globalization; essential conditions of globalization implications & impact of globalization; globalization of Indian business. FOREIGN TRADE POLICY AND REGULATION - Foreign trade policy ,2004-09;regulation and development of foreign trade; foreign trade (Development and Regulation) Act; export promotion; EOUs, EPEs and Sezs; international trade financing ;payment terms ;institutional finance for exports; Exim Bank; export credit risk insurance. - TRADE AND BOP OF INDIA - Highlights of India's Trade performance; determinants of export ;determinants of imports; major exports ;export product- country matrix; major imports; direction of trade ; trends in invisibles and current accounts ;balance of payments ;major problems of India's exports sector.

**TEXT BOOKS.**

1. Francis Cherunilam - International business management
2. Hill. C.W International business: competing in global market place

**REFERENCE BOOKS.**

1. Philip R. Cateora International market

## **SECOND SEMESTER**

### **2.1 HUMAN RESOURCE MANAGEMENT**

#### **UNIT - I: Human Resource Function**

Human Resource Philosophy - Changing environments of HRM - Strategic human resource management - Using HRM to attain competitive advantage - Trends in HRM - Organisation of HR departments - Line and staff functions - Role of HR Managers.

#### **UNIT - II : Recruitment & Placement**

Job analysis: Methods - IT and computerised skill inventory - Writing job specification – HR and the responsive organisation.

Recruitment and selection process: Employment planning and forecasting - Building employee commitment: Promotion from within - Sources, Developing and Using application forms - IT and recruiting on the internet.

Employee Testing & selection : Selection process, basic testing concepts, types of test, work samples & simulation, selection techniques, interview, common interviewing mistakes, Designing & conducting the effective interview, small business applications, computer aided interview.

#### **UNIT - III : Training & Development**

Orientation & Training: Orienting the employees, the training process, need analysis, Training techniques, special purpose training, Training via the internet.

Developing Managers : Management Development - The responsive managers - On-the-job and off-the-job Development techniques using HR to build a responsive organisation. Management Developments and CD-Roms - Key factor for success.

Performance appraisal : Methods - Problem and solutions - MBO approach - The appraisal interviews - Performance appraisal in practice.

Managing careers : Career planning and development - Managing promotions and transfers.

#### **UNIT - IV: Compensation & Managing Quality**

Establishing Pay plans : Basics of compensation - factors determining pay rate - Current trends in compensation - Job evaluation - pricing managerial and professional jobs - Computerised job evaluation.

Pay for performance and Financial incentives : Money and motivation - incentives for operations employees and executives - Organisation wide incentive plans - Practices in Indian organisations.

Benefits and services : Statutory benefits - non-statutory (voluntary) benefits - Insurance benefits - retirement benefits and other welfare measures to build employee commitment.

#### **UNIT - V: Labour relations and employee security**

Industrial relation and collective bargaining : Trade unions - Collective bargaining - future of trade unionism. Discipline administration - grievances handling - managing dismissals and separation.

Labour Welfare : Importance & Implications of labour legislations - Employee health - Auditing HR functions, Future of HRM function.

#### **References:**

1. Gary Dessler, "Human Resource Management", Seventh edition, Prentice-Hall of India P.Ltd., Pearson.
2. H. John Bernardin & Joyee E.A. Russel, Human Resource Management - An experiential approach, 4th Edition, McGraw-Hill International Edition., 2007

3. David A. DeCenzo & Stephen P. Robbins, Personnel/Human Resource Management, Third edition, PHI/Pearson.
4. VSP Roa, Human Resource Management : Text and cases, First edition, Excel Books, New Delhi - 2000.
5. Dr. R. Venkatapathy & Assissi Mencheri, Industrial Relations & Labour Welfare, Adithya Publications, CBE, 2001.
6. Robert L. Gibson and Marianne H. Mitchell, Introduction to Counseling and Guidance, VI edition, PHI, 2005.

## **2.2 BUSINESS ETHICS AND GLOBAL BUSINESS ENVIRONMENT**

### **UNIT I**

Business and society -Social responsibility --Environmental Pollution and control. Business and culture - Business and Government -Political system and its Influence on business - Business environment -The concept and significance-constituents of business Environment.

### **UNIT II**

Managing Ethics -Frame work of organizational ethic theories and sources, ethics across cultures, factors influencing business ethics, ethical decision making, ethical values and stakeholders, ethics and profit, Corporate governance Structure of boards, reforms in boards, compensation issues, ethical leadership for improved Corporate governance and better business education.

### **UNIT III**

Introduction -The Globalization of the World Economy –The Changing Nature of Indian and International Business -National differences in political, legal and culture-The Global Trade and Investment Environment-International trade Theory: Introduction - An Overview of Trade Theory -Mercantilism - Absolute Advantage Comparative Advantage –Huckster -Ohlin Theory - The New Trade Theory National Competitive Advantage - Porter's Diamond- The Revised Case for Free Trade -Development of the World - Trading System - WTO & development of World trade - Regional grouping of countries and its impact.

### **UNIT IV**

Foreign Direct Investment: Introduction -Foreign Direct Investment in the World Economy -Horizontal Foreign Direct Investment -Vertical Foreign Direct Investment. Benefits and advantages to host and home countries. The Global Monetary System, the Foreign Exchange Market: Introduction - The Functions of the Foreign Exchange Market.

### **UNIT V**

The Strategy and Structure of International Business-The Strategy of International Business: Introduction - Strategy and the Firm -Profiting from Global Expansion Pressures for Cost Reductions and Local Responsiveness - Strategic Choice. Mode of Entry and Strategic Alliances : Introduction - Entry Modes - Selecting and Entry Mode - Strategic Alliances - Making Alliances Work, Exporting, Importing and Counter trade - Introduction -The Promise and Pitfalls of Exporting -Improving Export Performance -Export and Import Financing - Export Assistance - Counter trade.

### **References :**

1. Kitson.A and Campbell.R - The Ethical Organisation, Palgrave, 2001
2. Davis & Keith William C. Frederik - Business and society
3. Francis Cherunilam - Business Environment
4. Pruti S. - Economic & Managerial Environment in India
5. Shaikh Saleem – Business Environment, Pearson Education, 2006
6. Hill.C.W., International Business : Competing in the Global market place, Irwin-McGraw
7. Hill, 1999.
8. Philip R.Cateora, International Marketing, Irwin McGraw Hill, 9th edn.
9. Shivaramu, International Business, Macmillan India.
10. Francis Cherunilam, International Business, Wheeler Publications.
11. Charles W.L., Hill, International Business, Irwin-McGraw Hill, 1998.



## **2.3 AVIATION ADVERTISING AND SALES PROMOTION**

### **UNIT- I INTRODUCTION TO ADVERTISEMENT**

Concept and definition of advertisement – Social, Economic and Legal Implications of Advertisements – setting advertisement objectives – Ad. Agencies – selection and remuneration – advertisement campaign.

### **UNIT- II ADVERTISEMENT MEDIA**

Media plan – type and choice criteria – reach and frequency of advertisements – cost of advertisements related to sales – media strategy and scheduling.

### **UNIT -III DESIGN AND EXECUTION OF ADVERTISEMENTS 10**

Message development – different types of advertisements – layout – design appeal – copy structure – advertisement production – print – Radio. T.V. and web advertisements – Media Research – testing validity and reliability of ads – measuring impact of advertisements.

### **UNIT- IV AIRLINE ADVERTISING**

Anatomy of sale - AIDA and SPIN Model – Marketing Communication Techniques – Airline Advertising – Selling in Air Freight Market – Case studies

### **UNIT-V SALES PROMOTION CAMPAIGN**

Sales promotion – Requirement identification – designing of sales promotion campaign – involvement of salesmen and dealers – outsourcing sales promotion national and international promotion strategies – Integrated promotion – Co-ordination within the various promotion techniques – online sales promotions.

### **REFERENCES:**

1. Kenneth Clow. Donald Baack, “Integrated Advertisements, Promotion and Marketing communication”, Prentice Hall of India, New Delhi, 2003.
2. S.H.H.Kazmi, Satish K Batra, “Advertising & Sales Promotion”, Excel Books, New Delhi, 2001.
3. George E Belch, Michel A Belch, “Advertising & Promotion”, McGraw Hill, Singapore, 1998.
4. Julian Cummings, “Sales Promotion”, Kogan Page, London 1998.
5. E.Betch and Michael, Advertising and Promotion, MC. Graw Hill.
6. Stephen Shaw “ Airline Marketing and Management “ Ashgate Sixth Edition

## **2.4 QUANTITATIVE METHODS FOR MANAGEMENT**

### **Objectives:**

To enable students to acquire the knowledge of mathematics & statistics and their use in business decision making.

### **UNIT I**

Linear, Non-Linear functions – graphical representation of functions, Constants, Variables – notion of Mathematical models – concept of trade off – notion of constants – concept of Interest. Basic Concept of differentiation – integration – Optimization concepts – use of differentiation for optimization of business problem- Optimization

### **UNIT II**

Data Analysis – Uni-Variate – ungrouped and grouped data measures of central Tendencies, measures of dispersion – C V percentages (problem related to business applications). Bivariate – correlation and regression – problems related to business applications

### **UNIT III**

Probability – definitions – addition and multiplication Rules (only statements) – simple business application problems – probability distribution – expected value concept – theoretical probability distributions – Binomial, Poisson and Normal – Simple problems applied to business.

#### **UNIT IV**

Mathematical Models – deterministic and probabilistic – simple business examples – OR and optimization models – Linear Programming – formulation – graphical solution – Dual of linear programming problem – Economic interpretation

#### **UNIT V**

Transportation model – Initial Basic Feasible solutions – optimum solution for non – degeneracy model – Trans-shipment Model – Assignment Model - Network Model – networking – CPM – critical path

#### **Reference Books :**

1. Statistics for Management – Richard L Levin & Daid S Rubin
2. Statistical Methods – S P Gupta
3. Statistics for Business and Economics – R P Hoods – MacMillan India Limited
4. Operations Research – An Introduction – Hamdy A Tata
5. Operations Research – Kanti Swarup, Gupta And Man Mohan
6. Operations Research – Dr. J.K. Sharma Macmillan Indian Ltd.
7. Operations Research – R. Panneerselvam, 2nd Edition, PHI, 2007

### **2.5 AVIATION FINANCE**

#### **UNIT- I FOUNDATION OF FINANCE**

Financial management – An overview, time value of money. Capital Budgeting: Principles and techniques, Nature of capital budgeting, Identifying relevant cash flows, Evaluation Techniques, Payback, Accounting rate of return, Net Present Value, Internal Rate of Return, Profitability Index, Comparison of DCF techniques, Project selection under capital rationing, Inflation and capital budgeting.

#### **UNIT -II AIRLINE FINANCIAL PERFORMANCE**

World Airline Financial results - Factor affecting Financial results - Airline Financial Statements - Airline Financial Ratios - Inter Airline Comparison of Financial Ratios - Valuation of Tangible Assets - Valuation of Intangible assets- valuation of Airline as a whole - Rating Agencies

#### **UNIT- III SOURCES OF FINANCE**

Sources of internal finance - sources of external finance - Institution evolved in Aircraft Finance - Equity Finance - Foreign Ownership Limits - Share trading and Share Market Listings - Initial Public Offerings - Airline Privatisation - Full Privatisation - Gradual Privatisation – Partial Privatisation

#### **UNIT -IV AIRLINE FINANCIAL PLANNING 10**

Budget Preparation and Control - Working capital Management - Principles of working capital: Concepts need; Determinants, issues and estimation of working capital, Accounts Receivables Management and factoring - Financial Planning

#### **UNIT- V RISK MANAGEMENT & LEASING 10**

Exchange rate volatility - Airline trading exposure to currency movements- Airline Foreign exchange risk management - Fuel price exposure - Aircraft leasing - Finance Lease – Operating Lease - Japanese Operating Lease - Wet Lease - Sale and Leaseback - Aircraft Securitizations

#### **Text Book**

1. Peter. S. Morrell , “ AIRLINE FINANCE “ , Third Edition Ash Gate.

**References**

1. I.M.Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 8th edition, 1999\
2. M.Y. Khan and P.K.Jain Financial management, Text, Problems and cases Tata McGraw Hill Publishing company Ltd., 4th edition, 2004.

**2.6 TOTAL QUALITY MANAGEMENT****UNIT- I****INTRODUCTION TO QUALITY MANAGEMENT**

Definitions – TOM framework, benefits, awareness and obstacles. Quality – vision, mission and policy statements. Customer Focus – customer perception of quality, Translating needs into requirements, customer retention. Dimensions of product and service quality. Cost of quality.

**UNIT- II****PRINCIPLES AND PHILOSOPHIES OF QUALITY MANAGEMENT**

Overview of the contributions of Deming, Juran Crosby, Masaaki Imai, Feigenbaum, Ishikawa, Taguchi techniques – introduction, loss function, parameter and tolerance design, signal to noise ratio. Concepts of Quality circle, Japanese 5S principles and 8D methodology.

**UNIT- III****STATISTICAL PROCESS CONTROL AND PROCESS CAPABILITY**

Meaning and significance of statistical process control (SPC) – construction of control charts for variables and attributed.

Process capability – meaning, significance and measurement – Six sigma concepts of process capability. Reliability concepts – definitions, reliability in series and parallel, product life characteristics curve. Total productive maintenance (TMP) – relevance to TQM, Tero technology. Business process re-engineering (BPR) – principles, applications, reengineering process, benefits and limitations.

**UNIT- IV****TOOLS AND TECHNIQUES FOR QUALITY MANAGEMENT**

Quality functions development (QFD) – Benefits, Voice of customer, information organization, House of quality (HOQ), building a HOQ, QFD process. Failure mode effect analysis (FMEA) – requirements of reliability, failure rate, FMEA stages, design, process and documentation. Seven old (statistical) tools. Seven new management tools. Bench marking and POKA YOKE.

**UNIT V****QUALITY SYSTEMS ORGANIZING AND IMPLEMENTATION**

Introduction to IS/ISO 9004:2000 – quality management systems – guidelines for performance improvements. Quality Audits. TQM culture, Leadership – quality council, employee involvement, motivation, empowerment, recognition and reward- Introduction to software quality.

**TEXT BOOKS**

1. Dale H.Besterfield et al, Total Quality Management, Third edition, Pearson Education (First Indian Reprints 2004).
2. Shridhara Bhat K, Total Quality Management – Text and Cases, Himalaya Publishing House, First Edition 2002.

## **THIRD SEMESTER**

### **3.1 CUSTOMS PROCEDURES**

#### **UNIT-I**

Preliminary-Definitions Officers of Customs-Classes-Appointments-Powers of Officers-Entrustments of Functions of Board, Appointment of Customs Ports, Airports, Warehousing Stations-Power to declare places to be Warehousing Stations. Prohibitions on Importation and Exportation of Goods-Power to Prohibit, Power of Central Government to notify goods-Precautions to be taken by persons acquiring notified Goods

#### **UNIT-II**

Prevention or Detection of Illegal Export of Goods-Power of Central Government to specify goods-Persons possessing specified goods to maintain Accounts-Steps to be taken by persons transferring any Specified goods, Power to exempt, Prohibitions on Importation and Exportation of Goods-Power to Prohibit, Power of Central Government to notify goods-Precautions to be taken by persons acquiring notified Goods. Prevention or Detection of Illegal Export of Goods-Power of Central Government to specify goods-Persons possessing specified goods to maintain Accounts-Steps to be taken by persons transferring any Specified goods, Power to exempt

#### **UNIT-III**

Levy of an exemption From, Customs Duties-Dutiable goods-Duty on Pilfered goods-assessment of Duty-Interest on delayed Funds-Claim for Refund of Duty-Provisional Attachment to protect revenue in certain cases, Indicating Amount of Duty in Price of Goods, for purpose of Refund-Price of goods to indicate amount of duty paid thereon. Advance Rulings-Authority for Advance Rulings-Application for Advance Ruling-Powers of Authority-Procedure of Authority.

#### **UNIT-IV**

Provisions relating to Conveyances Carrying Imported or Exported Goods-Arrival of Vessels and Aircraft in India-Power to board Conveyances-Delivery of export manifest or export report-No Conveyance to leave without written order. Clearance of Imported goods and Exported Goods-Chapter not to apply to baggage and Postal articles-Clearance of goods for home consumption-Clearance of goods for exportation.

#### **UNIT-V**

Goods in Transit-Transit and Transshipment of certain goods without payment-Liability of duty on goods transited or transhipped. Warehousing-Appointing of Public Warehouses-Licensing of Private Warehouses-Clearance of Warehoused goods for home consumption and Exportation-Cancellation and return of Warehousing bond. Drawback-Interest on drawback-Prohibition and regulation of drawback

#### **TEXT BOOKS:**

1. Guide to Customs Procedures 2009:10, Gururaj Bn, Centax Publications Pvt Ltd
2. Customs Law Practice and Procedures, V. S. Datey, Taxmann Allied Services Pvt. Ltd., 7th Edition 2010.

#### **REFERENCE BOOK:**

1. India Customs, Trade Regulations and Procedures Handbook India Customs, Trade Regulations and Procedures Handbook, IBP USA, International Business Publications, USA, Fourth Edition, 2009.

### 3.2 AIRLINE MARKETING MANAGEMENT

#### UNIT -I INTRODUCTION

Marketing conceptual frame work – marketing environment – customer oriented organization – marketing interface with other functional areas marketing in a globalised environment Marketing Mix - Stages in the Application of Marketing Principles to Airline Management

#### UNIT- II MARKET OF AIR TRANSPORT SERVICES

Customer – Definition – Apparent and True Needs – Industrial Buying Behaviour – Customer in the Business Air Travel Market – Customer in Leisure Air Travel Market – Customer in the Air Freight Market – Market Segmentation in Air Passenger & Air Freight Market – Marketing Environment - Theoretical Basis of PESTE Analysis – Building Customer Satisfaction

#### UNIT- III PRODUCT ANALYSIS IN AIRLINE MARKETING

Product – definition – Product Life Cycle – Product Life Cycles in Aviation Industry – Managing Product Portfolio – Balancing Risk and Opportunity – Fleet & Schedules related Product Features - Customer Service Related Product Features – Pricing Decisions – Building Blocks in the Airline Pricing Policy – Uniform and Differential Pricing – Distribution Channel Strategies – Travel Agency Distribution System – Global Distribution System - promotion methods. Advertisement and personal selling, public relations.

#### UNIT- IV MARKETING RESEARCH

Types, process – tools and techniques – application of marketing research – product launching, demand estimation, advertising, brand preferences, customer satisfaction, retail stores image, customer perception, distribution, customer relationship, competitor analysis and related aspects – preparation of marketing research report – sample case studies.

#### Unit- V INFORMATION TECHNOLOGY IMPACT ON MARKETING DECISIONS

Online marketing – web based marketing programmes – emerging trends and challenges to marketers.

#### TEXT BOOK

1. Stephen Shaw “ Airline Marketing and Management “ Ashgate Sixth Edition

#### References

1. Philip Kotler: Marketing management (Millennium edition), Prentice Hall of India P (ltd), New Delhi 2001.
2. Micheal R.Czinkota & Masaaki Kotabe, Marketing Management, Vikas Thomson learning 2000.
3. Douglas, J.Darymple Marketing Management John Wiley & Sons, 2000
4. NAG, marketing successfully a professional perspective, macmilan 2001.
5. Boyd Walker, Marketing Management, McGraw Hill, 2002
6. Aakar Day, Kumar, Essential of Marketing Research
7. Keith Flether, Marketing Management and Information Technology Prentice Hall, 1998.

### 3.3 AIRCRAFT RULES AND REGULATION C.A.R. I AND II

#### UNIT 1. C.A.R SERIES ‘A’ - PROCEDURE FOR CIVIL AIR WORTHINESS REQUIREMENTS AND RESPONSIBILITY OPERATORS VIS-A-VIS AIR WORTHINESS DIRECTORATE:

Responsibilities of operators / owners - Procedure of CAR issue, amendments etc.,-

Objectives and targets of airworthiness directorate - Airworthiness regulations - safety oversight of engineering activities of operators.

C.A.R. SERIES ‘B’ - ISSUE APPROVAL OF COCKPIT CHECK LIST, MEL, CDL: Deficiency list (MEL & CDL); Preparation and use of cockpit check list and emergency list.

## **UNIT 2. C.A.R. SERIES ‘C’ - DEFECT RECORDING, MONITORING, INVESTIGATION AND REPORTING**

Reliability Programme (Engines) - Aircraft maintenance programme & their approval – On condition maintenance of reciprocating engines - TBO - Revision programme - Maintenance of fuel and oil uplift and consumption - records - Light aircraft engines - Fixing routine maintenance periods and component TBOs - Initial & revisions.

## **UNIT 3. C.A.R. SERIES ‘E’ - APPROVAL OF ORGANISATIONS**

Approval of organisations in categories A, B, C, D, E, F, & G; Requirements of infrastructure at stations other than parent base

## **C.A.R. SERIES ‘F’ - AIR WORTHINESS AND CONTINUED AIR WORTHINESS:**

Procedure relating to registration of aircraft - Procedure for issue / revalidation of Type Certificate of aircraft and its engines / propeller - Issue / revalidation of Certificate of Airworthiness - Requirements for renewal of -Certificate of Airworthiness.

## **UNIT 4. C.A.R. SERIES ‘L’ - AIRCRAFT MAINTENANCE ENGINEER - LICENSING:**

Issue of AME Licence - its classification and experience requirements - Complete Series ‘L’. C.A.R. SERIES ‘M’ MANDATORY MODIFICATIONS AND INSPECTIONS: Mandatory Modifications / Inspections.

## **UNIT 5. C.A.R. SERIES ‘T’ - FLIGHT TESTING OF AIRCRAFT: 9**

Flight testing of (Series) aircraft for issue of C of A - Flight testing of aircraft for which C or A had been previously issued.

## **C.A.R. SERIES ‘X’ - MISCELLANEOUS REQUIREMENTS:**

Registration Markings of aircraft- Weight and balance control of an aircraft - Provision of first aid kits - Physician’s kit in an aircraft - Use furnishing materials in an aircraft - Concessions – Aircraft log books - Document to be carried on board on Indian registered aircraft - Procedure for issue of tax permit - Procedure for issue of type approval of aircraft components and equipment including instruments.

### **References:**

1. “ Aircraft Manual (India) “, Volume - Latest Edition, The English Book Store, 17-1, Connaught Circus, New Delhi.
2. “ Civil Aviation Requirements with latest Amendment (Section 2 Airworthiness) “, Published by DGCA, The English Book Store, 17-1, Connaught Circus, New Delhi.
3. “ Aeronautical Information Circulars (relating to Airworthiness) “, from DGCA.
4. “ Advisory Circulars “, from DGCA.

## **3.4 RESEARCH METHODOLOGY**

### **UNIT- I INTRODUCTION TO RESEARCH:**

The hallmarks of scientific research – the building blocks of science in research – the research process for applied and basic research – the need for theoretical frame work – hypothesis development – hypothesis testing with quantitative data. The research design. The purpose of the study: Exploratory, Descriptive, Hypothesis testing (Analytical and Predictive) – cross sectional and longitudinal studies.

**UNIT- II EXPERIMENTAL DESIGN:**

The laboratory and the field experiment – internal and external validity – factors affecting internal validity. Measurement of variables – scales and measurement of variables – development scales - rating scale and concept in scales being developed. Stability measures.

**UNIT- III DATA COLLECTION METHOD:**

Interviewing, questionnaires etc. Secondary sources of data collection. Guidelines for questionnaire design – electronic questionnaire design and surveys. Special data source: Focus groups, Static and dynamic data-collection methods and when to use each. Sampling techniques and confidence in determining sample size. Hypothesis testing determination of optimal sample size.

**UNIT- IV A REFRESHER ON SOME MULTIVARIATE STATISTICAL TECHNIQUES**

Factor analysis – cluster analysis – discriminant analysis –multiple regression & Correlation –canonical correlation – application of SPSS package.

**UNIT- V THE RESEARCH REPORT:**

The purpose of the written report – concept of audience – Basics of written reports. The integral parts of a report – the title of a report. The table of content, the synopsis, the introductory section, method of sections of a report, result section – discussion section – recommendation and implementation section.

**TEXT BOOKS:**

1. Donald R.Cooper and Ramcis S.Schindler, Business Research Methods, Tata McGraw Hill Publishing CompanyLimited, New Delhi, 2000.
2. C.R.Kothari Research Methodology, Wishva Prakashan, New Delhi, 2001.

**REFERENCES:**

1. Uma Sekaran, Research Methods for Business, John Wiley and Sons Inc., New York, 2000
2. Donald H.Mc.Burney, Research Methods, Thomson Asia Pvt. ltd. Singapore 2002.
3. G .W.Ticehurst and A.J.Veal, Business Research Methods, Longman, 1999.
4. Ranjit Kumar, Research Methodology, Sage Publication, London, New Delhi, 1999.
5. Raymond-Alain Thie'tart, ET, al., doing management research, sage publication, London,1999

**3.5 CUSTOMER RELATIONSHIP MANAGEMENT****UNIT -I****INTRODUCTION**

Definitions - Concepts and Context of relationship Management – Evolution - Transactional Vs Relationship Approach – CRM as a strategic marketing tool – CRM significance to the stakeholders.

**UNIT- II****UNDERSTANDING CUSTOMERS**

Customer information Database – Customer Profile Analysis - Customer perception, Expectations analysis – Customer behavior in relationship perspectives; individual and group customer's - Customer life time value – Selection of Profitable customer segments.

**UNIT- III****CRM STRUCTURE**

Elements of CRM – CRM Process – Strategies for Customer acquisition – Retention and Prevention of defection – Models of CRM – CRM road map for business applications.

**UNIT -IV****CRM PLANNING AND IMPLEMENTATION**

Strategic CRM planning process – Implementation issues – CRM Tools- Analytical CRM – Operational CRM – Call center management – Role of CRM Managers.

**UNIT- V****TRENDS IN CRM****TRENDS IN CRM**

e- CRM Solutions – Data Warehousing – Data mining for CRM – an introduction to CRM software packages. CRM Implementation–A comprehensive model-Developing CRM vision and strategy Management support.

**TEXT BOOKS**

1. G.Shainesh, Jagdish, N.Sheth, Customer Relationships Management Strategic Perspective, Macmillan 2005.
2. Alok Kumar et al, Customer Relationship Management: Concepts and applications, Biztantra, 2008

**REFERENCE BOOKS**

1. H.Peeru Mohamed and A.Sahadevan, Customer Relation Management, Vikas Publishing 2005.
2. Jim Catheart, the Eight Competencies of Relationship selling, Macmillan India, 2005.
3. Assel, Consumer Behavior, Cengage Learning, 6th Edition.
4. Kumar, Customer Relationship Management - A Database Approach, Wiley India, 2007.
5. Francis Buttle, Customer Relationship Management: Concepts & Tools, Elsevier, 2004.

**3.6 FIELD PRACTICAL****OBJECTIVES:**

The aim of this course is to understand various infrastructure / facilities / operations / costing that are involved in the logistics industry.

**LEARNING OUTCOMES:**

To get in depth knowledge of operation practices in the industry and submit reports on completion of each visit.

The following are areas of practical visits conducted:- Ports and terminals / Port operations / Container Freight Stations, Warehouses / Domestic warehouse / Bonded warehouse / Gowdens Inland container depots / Empty container plots Toll gates / Air cargo complex

**STUDENT ASSESSMENT**

1. The students are to prepare a practical visit report and record of the same to be maintained.
2. The students shall be assessed in any of the attended practical visits.



## **FOURTH SEMESTER**

### **4.1 AIRCRAFT MAINTENANCE MANAGEMENT**

#### **UNIT- I INTRODUCTION**

Development of air transportation, comparison with other modes of transport – Role of IATA, ICAO – The general aviation industry airline – Factors affecting general aviation, use of aircraft, airport: airline management and organisation – levels of management, functions of management, Principles of organisation planning the organisation – chart, staff departments & line departments.

#### **UNIT- II AIRLINE ECONOMICS**

Forecasting – Fleet size, Fleet planning, the aircraft selection process, operating cost, passenger capacity, load factor etc. – Passenger fare and tariffs – Influence of geographical, economic & political factors on routes and route selection -FLEET PLANNING: The aircraft selection process – Fleet commonality, factors affecting choice of fleet, route selection and Capital acquisition – Valuation & Depreciation – Budgeting, Cost planning – Aircrew evaluation – Route analysis – Aircraft evaluation.

#### **UNIT- III PRINCIPLES OF AIRLINES SCHEDULING**

Equipment maintenance, Flight operations and crew scheduling, Ground operations and facility limitations, equipments and types of schedule – hub & spoke scheduling, advantages / disadvantages & preparing flight plans – Aircraft scheduling in line with aircraft maintenance practices.

#### **UNIT- IV AIRCRAFT RELIABILITY**

Aircraft reliability – The maintenance schedule & its determinations – Condition monitoring maintenance – Extended range operations (EROPS) & ETOPS – Ageing aircraft maintenance production.

#### **UNIT -V TECHNOLOGY IN AIRCRAFT MAINTENANCE 8**

Airlines scheduling (with reference to engineering) – Product support and spares – Maintenance sharing – Equipments and tools for aircraft maintenance – Aircraft weight control – Budgetary control. On board maintenance systems – Engine monitoring – Turbine engine oil maintenance – Turbine engine vibration monitoring in aircraft – Life usage monitoring – Current capabilities of NDT – Helicopter maintenance – Future of aircraft maintenance.

#### **TEXT BOOKS**

1. FEDRIC J.H., “Airport Management”, 2000.
2. C.H. FRIEND, “Aircraft Maintenance Management”, 2000.

#### **REFERENCES**

1. GENE KROPF, “Airline Procedures”.
2. WILSON & BRYON, “Air Transportation”.
3. PHILIP LOCKLIN D, “Economics of Transportation”.
4. “Indian Aircraft manual” – DGCA Pub.
5. ALEXANDER T WELLS, “Air Transportation”, Wadsworth Publishing Company, California, 1993.

## **4.2 E- COMMERCE**

### **UNIT- I**

#### **FUNDAMENTAL OF E-COMMERCE**

Dividing forces –benefits and limitations of e-commerce- Basics of data mining, data warehousing and network infrastructure requirements - Overview of IP, TCP, HTML, OLAP and cryptography.

### **UNIT- II**

#### **BUSINESS APPLICATIONS IN E-COMMERCE**

Retailing in E-commerce –Market research on internet customers – e-commerce for services sector- Advertising in e-commerce –B2B e-commerce.

### **UNIT- III**

#### **E-COMMERCE INFRASTRUCTURE**

Intranet, internet & extranet- Structure, Architecture, Applications & Business models.

### **UNIT- IV**

#### **E -COMMERCE PAYMENTS AND SECURITY -**

E-payments and protocols-Security schemes against internet fraud. Principles of e-fund transfer, credit and debit card usages, E-check and unified payment systems.

### **UNIT -V**

#### **LEGAL AND PRIVACY ISSUES IN E-COMMERCE**

Legal, ethics and privacy issues –Protection needs and methodology –Consumer protection, Cyber laws, contracts and warranties, Taxation and Encryption polices.

### **REFERENCES**

1. Efaim Turban et al.'Electronic Commerce –A Managerial Perspective', Pearson Education Asia, 2002.
2. Kolkata et al, 'Frontiers of Electronic Commerce', Addison Welsley, 2001.
3. Sandeep Krishnamurthy,'E-Commerce Management –Text and Cases', Thomson Learning, 2003
4. Greenstein Firsman,'Electronic Commerce', Tata McGraw Hill, 1999.
5. Nabil Adam et al,'Electronic Commerce –Technical, Business and Legal Issues'. Prentice Hall.1998

## **4.3 STRATEGIC MANAGEMENT**

### **UNIT- I**

#### **STRATEGY AND PROCESS**

Conceptual framework for strategic management, the Concept of Strategy and the Strategy Formation Process – Stakeholders in business – Vision, Mission and Purpose – Business definition, Objectives and Goals - Corporate Governance and Social responsibility-case study.

### **UNIT- II**

#### **COMPETITIVE ADVANTAGE**

External Environment - Porter's Five Forces Model-Strategic Groups Competitive Changes during Industry Evolution-Globalisation and Industry Structure - National Context and Competitive advantage Resources- Capabilities and competencies–core competencies-Low cost and differentiation Generic Building Blocks of Competitive Advantage- Distinctive Competencies-Resources and Capabilities durability of competitive Advantage- Avoiding failures and sustaining competitive advantage-Case study.

### **UNIT III**

#### **STRATEGIES**

The generic strategic alternatives – Stability, Expansion, Retrenchment and Combination strategies - Business level strategy- Strategy in the Global Environment-Corporate Strategy- Vertical Integration-Diversification and Strategic Alliances- Building and Restructuring the corporation- Strategic analysis and choice - Environmental Threat and Opportunity Profile (ETOP) - Organizational Capability Profile - Strategic Advantage Profile - Corporate Portfolio Analysis - SWOT Analysis - GAP Analysis - Mc Kinsey's 7s Framework - GE 9 Cell Model - Distinctive competitiveness - Selection of matrix - Balance Score Card-case study.

### **UNIT IV**

#### **STRATEGY IMPLEMENTATION & EVALUATION**

The implementation process, Resource allocation, Designing organizational structure-Designing Strategic Control Systems- Matching structure and control to strategy-Implementing Strategic change-Politics-Power and Conflict-Techniques of strategic evaluation & control-case study.

### **UNIT V**

#### **OTHER STRATEGIC ISSUES**

Managing Technology and Innovation- Strategic issues for Non Profit organizations. New Business Models and strategies for Internet Economy-case study

### **TEXT BOOKS**

1. Thomas L. Wheelen, J.David Hunger and Krish Rangarajan, Strategic Management and Business policy, Pearson Education., 2006
2. Charles W.L.Hill & Gareth R.Jones, Strategic Management Theory, an Integrated approach, Biztantra, Wiley India, 2007.
3. Azhar Kazmi, Strategic Management & Business Policy, Tata McGraw Hill, Third Edition, 2008.

### **REFERENCE BOOKS**

1. Fred.R.David, Strategic Management and cases, PHI Learning, 2008.
2. Upendra Hachru , Strategic Management concepts & cases, Excel Books, 2006.
3. Adria H Aberberg and Alison Rieple, Dstrategic Management Theory & Application, Oxford University Press, 2008.
4. Arnolndo C.Hax and Nicholas S. Majluf, The Strategy Concept and Process – A Pragmatic Approach, Pearson Education, Second Edition, 2005.
5. Harvard Business Review, Business Policy – part I & II, Harvard Business School. Saloner and Shepard, Podolny, Strategic Management, John Wiley, 2001.
6. Lawrence G. Hrebiniak, Making strategy work, Pearson, 2005.
7. Gupta, Gollakota and Srinivasan, Business Policy and Strategic Management – Concepts and Application, Prentice Hall of India, 2005.

## 4.4 OPERATION MANAGMENT

### UNIT-I

Systems Approach-Historical Development of OM, JIT, TQC &Automation-Operating Decisions-Why study OM Concepts of Costing, Finance and Accountancy in OM-Operations Costing-Financial Management and Financial Analysis.

### UNIT-II

Job Design-Principles of Job Design-Behavioral Approaches to Job Design-Benefits of Sound Job Design-Process for Job design-Key factors in Job Design Introduction to Work Study-Productivity-Evolution and Development-Objectives of Work Study-Method Study-Application of Method Study-Performance Rating.

### UNIT-III

Introduction to Production Planning &Control-Aggregate Production Planning-Documents used in PPC. Demand Forecasting for Production Planning-Forecasting Approaches-Linear Regression Analysis-Time Series Methods-Simple Moving Averages-Weighted Moving Averages-Exponential Smoothing Methods.

### UNIT-IV

Aggregate Planning-Three dimensions of Aggregation-Purpose of Aggregate Planning-Techniques for Aggregate Planning, Master Production Scheduling-Benefits of Good Scheduling-Developing Master Production Schedules.

### UNIT-5

Detailed Scheduling Methods for Single Machine & Dispatching-Benefits of Good Scheduling-Gnatt Chart Line Balancing-Production Line-Steps in Line Balancing Procedure-Production Flow Control.

### TEXT BOOKS:

1. Productions and operations management by Everest E Adam abd Ebert.
2. Operations management (theory and problems) –Joseph G monks
3. Productions and operations management by S.N.Chary.

### REFERENCE BOOKS:

1. Modern production and operations management by E.S .Buffa.
2. Production and operations management by Hunawalla and Patil.