

PUNJAB TECHNICAL UNIVERSITY

Revised Syllabus

MBA

To be Applicable from session 2009-10:

- For MBA III Semester (2008-10 batch)
- &
- MBA I Semester (2009-11 batch) onwards

PUNJAB TECHNICAL UNIVERSITY
MBA COURSE STRUCTURE

CODE	NAME OF SUBJECT	External Marks	Internal Marks	Total Marks
SEMESTER I				
MB 101	Principles & Practices of Management	60	40	100
MB 102	Organizational Behaviour	60	40	100
MB 103	Accounting for Management	60	40	100
MB 104	Quantitative Techniques	60	40	100
MB 105	Managerial Economics	60	40	100
MB 106	Seminar on Executive Communication	00	100	100
MB 107	Workshop on Computers for Management	00	100	100
MB 108	Viva-voce			100
SEMESTER II				
MB 201	Business Environment	60	40	100
MB 202	Production & Operations Management	60	40	100
MB 203	Human Resource Management	60	40	100
MB 204	Marketing Management	60	40	100
MB 205	Financial Management	60	40	100
MB 206	Workshop on Research Methodology	00	100	100
MB 207	Workshop on Information Technology	00	100	100
MB 208	Viva-Voce			100
SEMESTER III				
MB 301	Applied Operations Research	60	40	100
MB 302	Corporate Legal Environment	60	40	100
MB 303	Major-I	60	40	100
MB 304	Major-II	60	40	100
MB 305	Major-III/ Minor-I	60	40	100
MB 306	Seminar on Management Information Systems	00	100	100
MB 307	Presentation of Training Report	60	40	100
MB 308	Viva-Voce			100
SEMESTER IV				
MB 401	Strategic Management	60	40	100
MB 402	Project Management & Entrepreneurship	60	40	100
MB 403	Major-IV	60	40	100
MB 404	Major-V	60	40	100
MB 405	Major-VI/ Minor-II	60	40	100
MB 406	Final Research Project (200 Marks)			200
MB 407	Viva-Voce			100

Note: (1) A team of two examiners will evaluate the Final Research Project. There will be one external and one internal examiner, each evaluating out of 100 marks. The Institute will select and invite an external examiner for the evaluation.

(2) The viva voce examination in all the four semesters will be conducted as provided for in the ordinances for MBA

There will be six to eight week training in any commercial and non-commercial institute after 2nd semester.

PUNJAB TECHNICAL UNIVERSITY

SPECIALIZATION COURSE STRUCTURE

SEMESTER	CODE	NAME OF SUBJECT	External Marks	Internal Marks	Total Marks
		Marketing			
MBA (III - Sem)	MB 901	Consumer Behaviour	60	40	100
	MB 902	Marketing Research	60	40	100
	MB 903	Retail and Supply Chain Mgmt.	60	40	100
MBA (IV - Sem)	MB 904	Advertising and Sales Management	60	40	100
	MB 905	Rural Marketing	60	40	100
	MB 906	Services Marketing	60	40	100
	MB 907	International Marketing	60	40	100
		Finance			
MBA (III - Sem)	MB 921	Security Analysis & Portfolio Mgmt.	60	40	100
	MB 922	Direct Tax Planning	60	40	100
	MB 923	Strategic Financial Management	60	40	100
MBA (IV - Sem)	MB 924	Management of Financial Services	60	40	100
	MB 925	International Finance	60	40	100
	MB 926	Management Control Systems	60	40	100
	MB 927	Financial Engineering	60	40	100
		Operations			
MBA (III - Sem)	MB 941	Production Planning & Control	60	40	100
	MB 942	Purchasing Management	60	40	100
	MB 943	Inventory Management	60	40	100
MBA (IV - Sem)	MB 944	Quality Management	60	40	100
	MB 945	Technology Management	60	40	100
	MB 946	Manufacturing Policy & Implementation	60	40	100
		Human Resource Management			
MBA (III - Sem)	MB 961	Social Security & Labour Welfare	60	40	100
	MB 962	Training & Development	60	40	100
	MB 963	Industrial/Organizational Psychology	60	40	100
MBA (IV - Sem)	MB 964	Industrial Relations & Labour Laws	60	40	100
	MB 965	Organization Development	60	40	100
	MB 966	Performance & Compensation Mgmt.	60	40	100
	MB 967	International Human Resource Mgmt.	60	40	100
		Information Technology			
MBA (III - Sem)	MB 981	Programming in C/C++	60	40	100
	MB 982	Relational Database Management System	60	40	100
	MB 983	Software Engineering	60	40	100
MBA (IV - Sem)	MB 984	E-Commerce & IT Enabled Services	60	40	100
	MB 985	Introduction to Computer Network	60	40	100
	MB 986	Visual Programming	60	40	100

PUNJAB TECHNICAL UNIVERSITY

COURSE STRUCTURE FOR SPECIALIZATION

Student has an option to select either of the following streams as Specialization:

- A. Super Specialization (Sem-III: 3 Subjects) & (Sem-IV: 3 Subjects)
- B. Major & Minor Combination (Sem-III: 2+1) & (Sem-IV: 2+1)

MAJOR/ MINOR COMBINATION

In III Semester

Two subjects of major specialization
One subject of minor specialization

In IV Semester

Two subjects of same major specialization
One subject of same minor specialization

Student opting for a specialization either as Major or as a Minor must study these subjects in respective Semester:

To be opted in

MARKETING

Consumer Behaviour
Advertising & Sales Management

MBA III Semester
MBA IV Semester

FINANCE

Security Analysis & Portfolio Management
Management of Financial Services

MBA III Semester
MBA IV Semester

OPERATIONS

Production Planning & Control
Quality Management

MBA III Semester
MBA IV Semester

INFORMATION TECHNOLOGY

Programming in C/ C++
E-Commerce & IT enabled services

MBA III Semester
MBA IV Semester

HUMAN RESOURCE MANAGEMENT

Social Security & Labour Welfare
Industrial Relation & Labour Laws

MBA III Semester
MBA IV Semester

PUNJAB TECHNICAL UNIVERSITY

PRINCIPLES & PRACTICES OF MANAGEMENT (MB-101)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit I

Definition, nature, purpose and scope of management. Functions of a manager, an overview of planning, organizing and controlling. Is managing a science or art? Ethics in managing and social responsibility of managers.

Evolution of management thought. Contributions of Taylor, Gantt, Gilbreth, Fayol, Weber, Elton Mayo, Chester Bernard, Maslow, Herzberg, Likert and McGergor. Management Science, Operations Research/Mathematical School/ Decision Theory approach. Systems Approach: Key concepts in systems Closed system vs. open system. Subsystems, System Boundary. McKinsey's 7-S Approach.

Unit II

Planning: Types of plans, steps in planning, and process of planning. Nature of objectives, setting objectives. Concept and process of Managing by Objectives. Nature and purpose of strategies and policies. Strategic planning process. SWOT analysis, Portfolio matrix, premising and forecasting.

Decision-Making: Importance and steps in Decision Making; Traditional approaches to decision-making; Decision making under certainty - programmed decisions; Introduction to decision-making under uncertainty, non- programmed decisions; decision tree; group-aided decisions; Brain storming; Creativity - creative problem solving.

Unit III

Organizing: Concept of organization, process of organizing, bases of departmentation, Authority & power - concept & distinction. Line & Staff concept; problems of use of staff & ways to avoid line-staff conflict Delegation - concept of delegation; elements of delegation - authority, responsibility, accountability. Reasons for failure of delegation & how to make delegation effective. Decentralization - concept, reasons for decentralization and types (or methods) of decentralization. Span of Management - concept, early ideas on span of management, factors determining effective span-situational approach.

Coordination- Concept and importance of coordination; factors which make coordination difficult; techniques or methods to ensure effective coordination.

Unit IV

Control: Concept, planning-control relationship, process of control -setting objectives, establishing standards, measuring performance, correcting deviations. Human response to control. Dimensions or Types of Control -(a) Feed forward control (b) Concurrent Control (Real Time Information & Control), (c) Feedback Control v) Techniques of Control - Brief review of Traditional Techniques & Modern Techniques of Control.

Comparative study: Comparative study of main features of Japanese Management and Z-culture of American Companies.

Recommended Text Books

Sr	Author	Books	Publisher
1	Harold Koontz & Heinz Weihrich	Essentials of Management	Tata McGraw Hill
2	Stoner, Freeman, Gilbert Jr.	Management	Pearson
3	Bhatt & Kumar	Principles of Management	Oxford Publication
4	Daft	The New Era of Management	Thomson Learning

Reference Books

Sr	Author	Books	Publisher
1	Heinz Weihrich ,Mark V Cannice & Harold Koontz	Management (A Global Perspective)	Tata McGraw Hill
2	Dubrin	Management	Cengage
3	Stephen Robbins & Coulter Mary	Management	Pearson
4.	Richy W.Griffin	Management	Biztantra
5	Terry & Franklin	Fundamentals of Management	Pear son Education Asia
6	Robins	Principles of Management	AITBS
7	Tripathi	History of Indian Business	Oxford Publications

PUNJAB TECHNICAL UNIVERSITY

ORGANISATIONAL BEHAVIOUR (MB-102)

Max. Marks:100
External Marks: 60
Internal Marks: 40

UNIT-I

Organizational Behavior: What managers do, Definition of OB, contributing disciplines to OB, challenges and opportunities for OB. Foundations of Individual behavior- biographical characteristics, ability, and learning.
Values, Attitudes
Personality and Emotions
Perception

UNIT-II

Motivation: Concept, Theories of Maslow , Herzberg, McClelland, Porter & Lawler Model, Application of Motivation Concept.
Job Satisfaction
Foundations of Group Behavior: Group formation, development and structure,
Group Processes, Group Decision- making Techniques, Work Teams.
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UNIT-III

Interpersonal Skill- Transactional analysis, Life Positions, Johari Window.
Leadership: Concept, theories styles and their application.
Power and Politics in Organization

UNIT-IV

Conflict Management, Stress Management, Crisis Management
Organizational Change & Development, Innovation, Creating a learning
Organization
Organizational Culture
Organizational Effectiveness.

Recommended Text Books

Sr.	Author	Title	Publisher
1.	Robbins	Organization Behaviour	Pearson Educationa Asia
2.	Luthans	Organization Behaviour	Tata McGraw Hill
3.	Udai Pareek	Understanding Origination	Oxford Publishing House
4.	Nelson	Organisational behaviour	Cengage
5.	Robin Fincham	Principals of Organization Behaviour	Oxford

Reference Books

Sr.	Author	Title	Publisher
1.	Hersey, Blanchard & Johnson	Management of Organizational Behaviour	Prentice Hall India
2.	Newstrom & Davis	Organizational Behaviour: Human Behaviour at Work	Tata McGraw Hill
3.	Rallinson, Broadfield & Edwards	OB & Analysis	Addison Wasley
4.	Aswathappa	Organization Behaviour	Himalaya

PUNJAB TECHNICAL UNIVERSITY

ACCOUNTING FOR MANAGEMENT (MB-103)

Max. Marks: 100

External Assessment: 60

Internal Assessment: 40

Unit I

Accounting as an information system, concepts, convention and principles of accounting, Role of accountant in an organization. Branches of accounting: Financial, Cost and Management Accounting and their inter-relationships.

Financial, Cost and Management Accounting, Revenue recognition, Preparation of Journal, Subsidiary books, Ledger, Trial Balance and Final Accounts of a sole trader and a partnership firm (with simple adjustments). Depreciation Accounting: Fixed installment and reducing balance methods.

Unit II

Financial Analysis-Concepts and objectives, Tools of Financial Analysis: trend analysis, common size statements, comparative statements, Introduction to ratio analysis, fund flow and cash flow statements (with additional information).

Unit III

Cost Accounting-Meaning, Scope and Classification of costs, Absorption costing, marginal costing.

Methods of valuing material issues.

Introduction to Break Even Analysis, Use of Cost-data in managerial Decision-making with special reference to pricing and make or buy decisions.

Introduction to Standard Costing including Variance Analysis - materials and labour variances.

Cost Control Techniques-Preparation of budgets and their control, Zero base budgeting. Standard costing and Variance analysis, Responsibility accounting.

Unit IV

Introduction to recent developments in cost management: Introduction to concept of Price Level Accounting, Human Resource Accounting, Target Costing, Kaizen costing Activity based costing, Life Cycle Costing.

Introduction to Tally Software Package in Accounting - Creating Companies, journal entries and ledger accounts.

Recommended Text Books

S.No	Author	Title	Publisher
1	I.M. Pandey	Management Accounting	Vikas Publishing House
2	S.N. Maheshwari	Financial Accounting	Vikas Publishing House

Reference Books

S.No	Author	Title	Publisher
1.	Horngren, Sundem & Stratton	Introduction to Management Accounting	Prentice Hall India
2.	R.K, Lele, Jawahar Lal	Accounting Theory	Himalaya Publishing House
3.	L.S. Porwal	Accounting Theory	Tata McGraw Hill
4.	A.K.Vashisht, J.S Pasricha	Management Accounting Pvt.Ltd.	Unistar Books
5.	S.P.Jain, K.L. Narang	Cost Accounting Principles & Practices	Kalyani Publishers
6.	D.R. Hansen & Mowen	Managerial Accounting	Cengage
7.	Bhattacharyya & John Dearden	Accounting for management text and cases House	Vikas Publishing
8.	Paresh Shah	Basic Financial Accounting formanagement	Oxford

PUNJAB TECHNICAL UNIVERSITY

QUANTITATIVE TECHNIQUES (MB-104)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit I

Role of Mathematics and statistics in Business Decisions
Theory of Sets
Compound interest, depreciation and annuities.
Equations: Linear, Quadratic & Simultaneous Equations
Matrix Algebra
Binomial Theorem
Principles of Mathematical Induction, Arithmetic Progression & Geometric Progression

Unit II

Data Analysis: Measure of Central Tendency
Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, and Standard Deviation and Coefficient of Variation, Skewness and Kurtosis
Index Numbers, Methods: Simple, Aggregate, Weighted, Test

Unit III

Correlation Analysis: Rank Method & Karl Pearson's Coefficient of Correlation and Properties of Correlation.

Regression Analysis: Fitting of a Regression Line and Interpretation of Results, Properties of Regression Coefficients and Relationship between Regression and Correlation
Time Series Analysis, Trend Variation, Least Square Fit, Seasonal Variation

Unit IV

Theory of Probability, Addition and Multiplication Law, Baye's Theorem
Theoretical Distributions: Binomial, Poisson and Normal Distribution
Sampling Distribution, Standard Error
Theory of Estimation, Point Estimation, Interval Estimation
Testing of Hypothesis: Large Sample Tests, Small Sample test, (t, F, Z Test and Chi Square Test).

Recommended Text Books

S.No	Author	Title	Publisher
1.	Levins, Krehbiel & Berenson	Business Statistics	Pearson
2.	Levin & Rubin	Statistics for Management	Prentice Hall
3.	Sancheti & Kapoor	Business Mathematics	Sultan Chand
4.	Anderson, Sweeney & Williams	Statistics for Business & Economics	Cengage Learning
5.	Gupta	Statistical Methods	Sultan Chand
6.	Gerlad Keller	Statistics for Management	Cengage Learning

Punjab Technical University
Managerial Economics (MB 105)

Max Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT-I

Introduction to Managerial Economics: Scope of Managerial Economics and other disciplines, Basic economics concepts in decision-making Distinction between Micro and Macroeconomics.

Demand analysis: Types, determinants, elasticity, demand function, demand forecasting.

UNIT-II

Cost Analysis: Concept of cost and its types, cost output relationship in short and long period, supply curve. Iso-quant curves, Indifferences curves.

Pricing analysis: Market structures, price determination under different market situations, price discrimination, selling costs, products differentiation, Various pricing methods, transfer pricing, break even analysis, profit planning.

UNIT-III

National income analysis: Techniques of social accounting. Theories of income ,output and employment: Classical Keynesian. Demand behaviour: Duessenbury and friedman.

Theory of multiplier: Concepts of static and dynamic multiplier, balanced budget multiplier . Income generation process through multiplier.

UNIT-IV

Theory of trader cycle: Concepts and causes of trade cycles. Measures to control trade cycles.

Macro economics policy: Monetary and fiscal.

Theories of inflation: cause and control of inflation.

Recommended Text Books

Sr No	Author	Title	Publisher
1	K.K. Dewett	Modern Economic Theory	S. Chand
2	D.M. Mithani	Managerial Economics: Theory & Application	Himalaya
3	H.L. Ahuja	Macro Economics- Theory & Policy	S. Chand
4.	Sumadamodaram	Managerial Economics	Oxford

Reference Books

Sr No	Author	Title	Edition	Publisher
1	Mote,Paul,Gupta Hill	Managerial Economics	1 st	Tata McGraw
2	D.N. Dwivedi	Managerial Economics	6 th	Vikas
3	H.C. Peterson & W.C. Lewis	Managerial Economics	4 th	Prentice Hall India
4	Edward Shapiro	Macro Economics Analysis	5 th	Galgotia
5.	Hirschey	Economics for Manager		Cengage
6.	A. Koutyiannis	Modern Micro Economics	2 nd	McMillan

PUNJAB TECHNICAL UNIVERSITY

SEMINAR ON EXECUTIVE COMMUNICATION (MB-106)

Max. Marks: 100
Internal Assessment: 100

Unit I

Meaning and important of communication in business, the process of communication, models of communication, types of information-order, advise, suggestion, motivation, persuasion, warning and education.

Channels of communication, their effectiveness, limitations. Media of communication, barriers of communication, approaches to effective communication, tools of communication, Diction, sentence, paragraph, punctuation and report writing.

Unit II

Specific business communication: Essentials of effective business communication (7Cs model of effective communication)

Group communication through committees, conference and other formal communication with public at large, interviews, seminar, symposia and conferences.

Role of communication in Crisis Management
Business Etiquettes and Communication

Unit III

Corporate Communication: Its importance and how it is different from general communication

Strategic Communication: The Congruence Model

Managing the Grapewine

Structure of business correspondence: inquires and replies, orders and their executions, complaints and adjustment, credit and status inquires, agency letters and sales letters.

Unit IV

Developing Effective Public Relations: Drafting of Press Release, Brochures, Handouts, Leaflets, e-newsletters

Letter writing: Good news, Bad news, Informative news, Persuasive news, Memorandum drafting

E-mail writing

Report writing – Short & Long Formal Reports

Strategies to improve - reading skills, speaking skills, listening skills

Guidelines to effective public speaking

Developing job application – Covering letter, Resume

Interviewing: Negotiating the job offer

Recommended Text Books

S.No.	Author	Title	Publisher
1	Lesikar, Petit &	Lesikar's Basic Business	Tata McGraw
2	Flatley	Communication	Hill

Reference Books

S.No.	Author	Title	Publisher
1	Poe & Fruchling	Basic Communication	AITBS
2	Taylor	English Conversion Practice	Tata McGraw
3	Meenakshi raman	Business Communication	Oxford
4	Baugh, Frayer & Thomas	How to write first class Business Correspondence	Viva Books

PUNJAB TECHNICAL UNIVERSITY
WORKSHOP ON COMPUTERS FOR MANAGEMENT (MB-107)

Max. Marks: 100

Internal Assessment: 100

Unit I

Introduction to Computers: Block structure of a computer, Components of a computer system.

Introduction to Problem Analysis, Flow Chart and Algorithm.

Introduction to High Level and Low Level Languages.

Software: System s/w, Application s/w.

Basic concepts of operating systems.

Internet access:

Introduction to www, Internet and intranet

- Creation of E-mail address
- Send & receive messages
- Use of search engines
- Delivering information with Microsoft Mail.
- Use of MS - Outlook/Outlook Express

Unit II

MS-Office (Contemporary version):

- **Word processing:** MS-Word, word basics, Creating a new word document, page-setup, Editing document, cut, copy, paste, paste special, paste as hyperlink. Different views of document, tool bar customization, formatting text and documents, working with header and footer, footnotes, endnotes, tables and sorting, graphics, mail merge and macros.

Insert page break, column break, section break, paragraph, change cases, borders and shading. Spelling and grammar checking, Auto correct, Track changes, Inserting, deleting, selecting table, Insert rows and columns, Table auto format, formulas, split table.

Unit III

- **Power Point:** Basics, working with texts and graphics in Power Point, adding animation, sound, pictures and video. Creating new slide, inserting new slide, background setting, auto layout, apply design templates. Inserting header and footer, Slide from file, Clip art. Different view of slide, duplicates, delete slide, slide sorter, Master slide. Animation setting, slide transition, custom show.

Unit IV

- **MS Excel:** Spreadsheets and their uses in business, Excel basics, Creating a new worksheet, rearranging worksheets, excel formatting techniques, using functions and working with graphics in excel. Cut, Copy, Paste, Paste special, Auto fill, Delete Sheet, Clear. Page break preview, Custom View, Header and footer. Inserting Row, Column, Worksheet, Function, Object, Hyperlink. Formatting row and column. Protection, goal seeks scenarios, Customize, option, sort, filter, form, and subtotal. Validation, table, consolidate, pivot table and chart, get external data.

Text Books:

Sr.	Author	Title	Publisher
1	P.K.Sinha	Fundamental of Computers	BPB
2	Leon & Leon	Internet for Everyone	Leon Tech World
3	Curtin, Foley, Sen & Martin	Information Technology	Tata MCGraw Hill
4	Ron Masfield	MS-Office	Tech publication
5.	Peter Norton	Introduction To Computers	McGraHill
6.	Behrouz Forouzan & Firouz Mosharraf	Basic of Computer science	Cengage Learning

PUNJAB TECHNICAL UNIVERSITY
BUSINESS ENVIRONMENT (MB. 201)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit I

Introduction, definition, components and overview of Business Environment. Complexity and Diversity of Business Environment in the 21st century.

Concept of Business Cycle

Need to scan the business environment and techniques of scanning the business environment.

Political Environment: Three political institutions: Legislature, Executive and Judiciary. Brief note on Fundamental rights and Directive Principles of state policy. Rationale and extent of state intervention.

Unit II

Economic Environment: Concept of Economic systems, objectives, strategies and evaluation of current five year plan. New Industrial policy and industrial licensing. New economic policies, Emerging Economies. Effect of recession on Business and remedies for that.

Legal Environment: Company regulatory legislations in India, FEMA, Latest EXIM policy. Competition Law.

Unit III

Public Sector in India: Concepts, philosophy and objectives, performance, problems and constraints. Divestment and Privatisation. Joint sector and co-operative sector in India.

Social Environment: Social responsibility of business, consumer movement & Consumer Protection Act 1986, Business Ethics, Cross-Cultural Business Environment, The Environment Protection Act 1986,.

Unit IV

Technological Environment: Impact of technology on business. Technological policy, import of technology, appropriate technology, problems in technology transfer.

International Environment: Emergence of globalisation. Control of foreign direct investment, benefits and problems from MNCs. WTO, its role and functions, implications for India. Trading Blocks.

Recommended Text Books:

S.No	Author	Title	Edition	Publisher
1.	Aswathappa	Essentials of Business Environment	10 th	Himalaya
2.	Sengupta	Government & Business	6 th	Vikas

Reference Books:

S.No	Author	Title	Edition	Publisher
1.	Aggarwal & Diwan	Business Environment	1 st	Excel
2.	Cherunilam	Business Environment	8 th	Himalaya
3	Kazmi	Business Policy & Strategic Management	2 nd	Tata McGraw-Hill

PRODUCTIONS & OPERATIONS MANAGEMENT (MB: 202)

Max Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit 1:
Operations management: Concept, Functions. Product Design and development – Product design and its characteristics: Product development process (Technical): Product development techniques .Process selection- Project, job, Batch, Mass and Process types of Production Systems. Product –Process Mix
Unit II
Facility Location – importance, Factors in Location Analysis: Location Analysis Techniques. Facility Layout – Objectives: Advantages: Basic types of layouts. Capacity Planning – Concept Factors Affecting Capacity Planning, Capacity Planning Decisions. Production Planning & Control (PPC) –Concepts, Objectives, Functions. Work Study – Productivity: Method Study; Work Measurement.
Unit III
Introduction to modern productivity techniques – just in time, Kanban system. Total Quality Management & six sigma. Functions of Purchasing Management – Objectives, Functions: Methods: Procedure. Value analysis – Concepts. Stock control systems. Virtual factory concept. Production worksheets.
Unit IV
Inventory Management – Concepts, Classification: Objectives: Factors Affecting Inventory Control Policy: Inventory costs: Basic EOQ Model: Re-order Level: ABC Analysis. Quality Management - Quality Concepts, Difference between Inspections, Quality Control, Quality Assurances, Total Quality Management: Control Charts: acceptance Sampling.

Recommended Text Books

S. No	Author	Title	Edition	Publisher
1.	Nair	Production & Operations Management	1 st	Tata McGraw
2.	Adam and Eben	Production & Operations Management	5 th	Prentice Hall India

Reference Books

S.No	Author	Title	Edition	Publisher
1.	Krajewski & Ritzman	Operations Management	5 th	Pearson
2.	Gaither	Operations management		Cengage
3.	Buffa & Sarin	Modern Production/Operations Management	8 th	John Wiley
4.	Chary	Production & Operations Management	2 nd	Tata McGraw Hill
5.	Kanishka Bedi	Productions and Operations Management		Oxford

PUNJAB TECHNICAL UNIVERSITY
HUMAN RESOURCE MANAGEMENT (MB-203)

Max. Marks :100
External Assessment : 60
Internal Assessment :40

UNIT-I

Introduction: Meaning, scope, objective, functions, policies & roles and importance of Human Resource Management. Interaction with other functional areas.

HRM &HRD a comparative analysis,

Organizing the Human Resource Management department in the organization.

Human Resource Management practices in India.

Human Resource Planning: Definition, objectives, process and importance Job analysis,

Description, specification & job evaluation.

UNIT-II

Recruitment,

Selection,

Placement and Introduction Process.

Human Resource Development: Concept, Employee training & development

Career Planning & development

UNIT-III

Performance management : concept and process, performance appraisal, Potential appraisal

Job Compensation : Wage & salary administration, incentive plans & fringe benefits

Promotions, demotions, transfers, separation, absenteeism & turnover.

Quality of work life (QWL): Meaning, origin, development and various approaches and to QWL,

techniques for improving QWL.

Quality circles: concept, structure , role of management quality circle in India

UNIT IV

Job satisfaction and morale.

Health, Safety & Employee welfare.

Counseling for effective Human Resource Development.

Human Resource : definition, objectives & approaches to human relations,

Employee grievances and discipline ,participation & empowerment,

Introducing to collective bargaining

HR Audit.

Suggested Readings:

S. No.	Author	Title	Publisher
1	V.S.P. Rao	Human Resource Management	Exel
2	C.B. Memoria	Personal Management	Himalaya
3	Edwin B. Flippo	Personal Management	Tata Mc Graw Hill
4	K. Aswathappa	Human Resource Management	Tata McGrawHill
5	Dale Yoder	Personal Management & Industrial Relations	Tata Mc Graw Hill
6	C.B. Gupta	Human Resource Management	Sultan Chand and Sons
7	V.P. Michael	HRM & Human Relations	
8	R.S. Dwivedi	HRD in India Companies	Himalaya
9	Gary Dessler	Human Resource Management	Mc Millan
10	Paul Banfield	Introduction to Human resource management	Oxford

PUNJAB TECHNICAL UNIVERSITY
Marketing Management (MB204)

Max. Marks :100
External Assessment : 60
Internal Assessment :40

UNIT-I

Introduction to marketing: Core concepts, Marketing and selling, Marketing mix. Factors affecting marketing environment. Marketing and globalization Marketing planning process & strategic planning. Marketing Information System : Concept and Components. Consumer Behaviour & Factors influencing consumer buying behaviour, Buying process. Market Segmentation & Targeting. Competitors Analysis.

UNIT-II

Product Decisions: Product Mix, Differentiation & Positioning, New product development, Consumer adoption process, Product Life Cycle and strategies, Packaging and Labeling decisions. Branding & brand equity, Services Marketing, Pricing Decisions: Objectives, Factors affecting pricing decisions, Pricing Methods, Pricing Strategies.

UNIT-III

Distribution Decisions: Nature and types of Marketing Channels, Channel Design and Channel Management Decisions, Retailing, Wholesaling, Physical distribution. Promotion Decisions : Communication process, Promotion Mix, Advertising, Sales Promotion, Public Relations, Managing the Sales force.

UNIT-IV

New Concepts: Green Marketing, Global Marketing, Buzz marketing, viral marketing Customer Relationship Management (CRM)
Strategic marketing vs. Marketing management, Strategic marketing process.
E-Commerce: Marketing in the digital age.

Text Books

Title	Author	Publication
Marketing Management	Kotler, Philip	Pearson Education
Marketing Management	Evans & Barmen	Cengage
Marketing Management	Ramaswamy & Namakumari	McMillan

Principles of Marketing	Kurtz & Boone	Cengage
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Principles of Marketing	Kotler & Armstrong	Pearson Education
Marketing Management	Kotler & Koshy	Pearson Education
Marketing Management	Biplab S. Bose	Himalaya
Textbook Of Marketing	Keith Blois	Oxford

PUNJAB TECHNICAL UNIVERSITY
FINANCIAL MANAGEMENT (MB-205)

Max. Marks : 100

External Assessment : 60

Internal Assessment : 40

Unit I

Evolution of Financial-management, scope and objectives of financial management, agency problem. Time Value of Money, Valuation of bonds and stocks.

Source of Long Term funds: Equity shares, Preference share, Debentures, public deposits, factors affecting long term funds requirements.

Unit – II

Capital Budgeting: Capital Budgeting process, Project Selection. Estimation of project cash flows,

Capital Budgeting Techniques: Payback Period Methods, Average rate of return, Net Present Value methods, IRR, Benefit-Cost ratio, Capital rationing.

Unit – III

Capital Structure: Determinants of Capital Structure, Capital structure theories, Cost of Capital, Operating and Financial Leverage.

Management of Retained Earnings: Retained earnings & Dividend policy, Consideration in dividend policy, Forms of Dividends theories, Bonus Shares.

Lease financing: Concepts, types of leases, Advantages and disadvantages of leasing, Evaluation of lease agreement.

Unit – IV

Working Capital: Concept factors affecting working capital requirements, determining working capital requirements , Sources of working capital.

Receivables Management, Inventory Management, and Cash Management.

Recent Developments—Introduction to concepts of EVA, MVA and CAPM.

Recommended Text Books:

S.No	Author	Title	Publisher
1.	I.M. Pandey	Financial Management	Vikas publishers
2.	Khan & Jain	Financial Management	Tata McGraw Hill
3.	Prasanna Chandra	Financial Management (Theory & Practice)	Tata McGraw Hill

Reference Books:

S.No	Author	Title	Publisher
1.	James C. Van Horne	Financial Management & Policy	Pearson Education Asia
2.	James C. Van Horne & John M.	Fundamentals of Financial Management	Pearson Education Asia
3.	Brealy & Myres	Principles of Corporate Finance	Tata McGraw Hill
4.	John J. Hampton	Financial Decision Making: Concept, Problem & Cases	Prentice Hall India
5.	P.V.Kulkarni	Financial Management	Himalaya
6.	Lawrence J. Gitman	Principles of Management	Pearson Education
7.	Brigham & Buzzard	Cases in Financial Management	Cengage

PUNJAB TECHNICAL UNIVERSITY
WORKSHOP ON RESEARCH METHODOLOGY (MB - 206)

Max. Marks: 100
Internal Assessment : 100

Unit 1

Introduction to Research : Definition, Scope, Limitations, and Types.
Objectives of Research, Research Process, Defining a research problem,
Research Designs: Qualitative and Quantitative Research; Exploratory,
Descriptive and Experimental designs.

Unit II

Types of Data: Primary and Secondary Data; Methods of Data Collection.
Primary Scales of Measurement: Nominal, Ordinal, Interval and Ratio; Types of
Scales: Ranking and Rating Scales.

Unit III

Designing Questionnaire
Sampling: Basic Concepts, Techniques and Determination of Sample Size
Preparation of Data for Analysis: Editing, Coding, Tabulating.

Unit IV

Theory of Estimation, Formulation and Testing of Hypothesis
Small & Large Sample Tests, Tests of Significance based on t, F, Z test and Chi-
Square test.
Use of Software Packages for Data Analysis.
Research Report Writing: Contents of Report, Executive Summary, Bibliography
format.
Presentation of Report.

Recommended Text Books:

S.No	Author	Title	Publisher
1.	Cooper & Schindler	Business Research Methods	Tata McGraw Hill
2.	Goods & Hatt	Methods in Social Research	Tata McGraw Hill
3.	Zikmund	Business Research Methods	Thomson Learning
4.	Saunders, Thornhill & Lewis	Research Methods for Business Students	Pearson
5.	Alan Bryman	Business Research Method	Oxford

PUNJAB TECHNICAL UNIVERSITY
WORKSHOP ON INFORMATION TECHNOLOGY (MB-207)

Max. Marks: 100

Internal Assessment: 100

Unit I

MS Access:

- **Creating** Tables, adding and deleting records
- **Querying:** creating, saving and editing; joining tables in queries
- **Forms:** creating and using forms,
- **Reports:** creating and printing reports,
- **Macros:** concept and simple use of macros
- **Modules:** writing programs using Visual Basic for Applications (VBA).
- **Security:** access control by enabling and disabling menus.
- Managing Data and Files

Unit II

Application of IT: Business, Educational, Decision Support System, Inventory, etc.

Introduction to ERP, CRM, SAP, DBMS, SPSS.

Unit III

Communication: The Electronic Web; Network Applications: voice, Information Services, Internet chat, Group chat, Voice over Internet Protocol: voice conference, Video conferencing.

Computer Network & Communication: Network types, Network topologies, Network Communication Devices, Physical Communication Media, Network Protocol (TCP/ IP).

Unit IV

Working with Tally or any other Accounting Software package

Text Books:

Sr. Author Title Publisher

1	P.K.Sinha	Fundamental of Computers	BPB
2	Leon & Leon	Internet for Everyone	Leon Tech World
3	Curtin, Foley, Sen & Martin	Information Technology	Tata MCGraw Hill
4	Ron Masfield	MS-Office	Tech Publication

PUNJAB TECHNICAL UNIVERSITY
APPLIED OPERATIONS RESEARCH (MB 301)

Max. Marks: 100
Internal Assessment: 40
External Assessment: 60

Unit I

Introduction to OR: Managerial Decision Making and OR.
OR Models: Principles and Types.
Linear Programming: Problem Formulation, Graphical & Simplex Method, Duality, and Sensitivity Analysis

Unit II

Transportation Models, Trans-shipment Problem, Travelling Salesman Problem, Assignment Models.
Replacement Models: Group Replacement, Individual Replacement
Queuing Theory: Models (M/M/1): (FcFs/∞); (M/M/1) : (FcFs/N)

Unit III

Inventory control (deterministic Models only) Price Break Inventory Model
Dynamic Programming. Principles of Optimality, Recurrence Relation
Game Theory. Zero Sum Two Person Game, Saddle Point, Graphical Method, Approximation Method, Pure Mixed Strategy, Dominance

Unit IV

PERT-CPM: Uncertainty of PERT, Early Start, Early Finish, Late Start Late Finish and Float, Crashing of activity in CPM, Resource Leveling.
Decision Making: Decision making environment, decision under uncertainty, decision under risk, decision tree analysis.

Recommended Text Books

S.No	Author	Title	Edition	Publisher
1	J K Sharma	Quantitative Techniques Managerial Decisions.	1st	Macmillan
2	N D Vohra	Quantitative Techniques Management	2nd	Tata McGraw Hill
3	S.D.Sharma	Operations Research	12th	Kedar Nath Ram Nath & Co
4	V.K.Kapoor	Operations Research	7th	Sultan Chand
5	Anderson	Introduction to Accounting		Cengage

Reference Books

S.No	Author	Title	Edition	Publisher
1.	Tulsian & Pandey	Quantitative Techniques	1 st	Pearson Edn.
2.	Hillier & Lieberman	Introduction to Operations Research	7 th	Tata McGraw Hill
3.	J. K. Sharma	Operations Research		McMillan
4.	H.A.Taha	Operations Research		
5.	C.K.Mustafi	Operations Research		
6.	Kanti Swaroop	Operations Research		
7.	Hira Gupta	Operations Research		

PUNJAB TECHNICAL UNIVERSITY

CORPORATE LEGAL ENVIRONMENT (MB-302)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit I

Law of Contract: Definition, offer and Acceptance, Consideration, Capacity of parties, Free Consent, Legality of Object, Performance and Discharge of Contract and Remedies for Breach of Contract. Introduction to the concept of agent and different types of mercantile agents. Bailment and Pledge, Indemnity and Guarantee.

Unit II

Sale of Goods Act: Meaning, Formation of contract, Meaning of condition and warranties. Difference between Transfer of Property and Possession, Right of an Unpaid Seller.

Negotiable Instrument: Bills of Exchange, Promissory Note, Cheque and Rules Regarding the Crossing of Cheques. Dishonor of cheques and liability of banker and drawer.

Unit III

Law of Insurance: Fundamentals Elements of Insurance.

Basic features of law relating to carriers (Air, Road, Rail and Shipping)

Unit IV

Company law: Characteristic of Company, distinction between company and partnership. Kinds and Formation of Company, Share capital, Types of Shares, Provision with respect to appointment and removal of Director, Meeting, Winding Up by court.

Taxation: Constitutional framework of taxation. Basics of Direct and indirect taxes(Income Tax, Central excise, Customs, Central and state sales tax).

Recommended Text Books

S.No	Author	Title	Publisher
1	Chawla, Garg & Sarin	Mercantile Law	Kalyani
2.	Ravinder kumar	Legal aspects of buss.	Cengage

PUNJAB TECHNICAL UNIVERSITY

SEMINAR ON MANAGEMENT INFORMATION SYSTEM(MB 306)

Max. Marks: 100

Internal Assessment: 100

Unit I

Introduction: Why information systems? Perspectives and contemporary approaches to information system, Usage of information systems.

Information system in Enterprise: Major types of systems in organizations, Systems from functional perspective, integrating functions and business processes, management opportunities, challenges and solutions.

Information systems, organizations, management and strategy: Impact of information system on business organizations, impact of IT on management decisions, Information systems and business strategy, management opportunities, challenges and solutions.

Managing the Digital firm: E-business, e-commerce and emerging digital firm, management opportunities challenges and solutions. Ethical and social issues related to information systems in digital firm and information society, Managing knowledge in the digital firm: Enterprise wide knowledge management systems, Intelligent techniques, management opportunities, challenges and solutions.

Enhancing Decision Making for Digital Firm: Decision Making and Decision Support System (DSS), Group decision support system (GDSS), Executive support in the enterprise, management opportunities challenges and solutions.

Unit II

Wireless Revolution: Wireless computing landscape, networks and internet access, M-commerce and mobile computing, wireless technology in the enterprise, management opportunities challenges and solutions.

Security and Control: System vulnerability and abuse, business value of security and control, establishing framework, technologies and tools for security and control, management opportunities challenges and solutions.

Unit III

Enterprise application and business process integration: Enterprise systems, Supply chain Management systems, customer relationship management system, enterprise integration trends.

Unit IV

Redesigning the Organization with the information systems: Systems as planned organizational change, business process reengineering and process improvement, overview of systems development, alternative systems building approaches, management opportunities challenges and solutions.

Managing International Information systems: Growth of international information system, organizing and managing international information systems, technology issues

and opportunities for global value change, management opportunities challenges and solutions.

Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Laudon Laudon	& Management Systems: Organisation Technology	Informa 7 th	Pearson
2.	Goyal	Management Systems: Perspectives	Informa Manag	McMillan

Reference Books

S.No	Author	Title	Edition	Publisher
1.	Alter	Information Management Perspective	Systems: 3 rd	Pearson
2.	Murdick, Ross Claggett	Information Systems for Modern Management	3 rd	Prentice Hall In
3.	Kanter	Managing with Information	4 th	Prentice Hall In
4.	Davis & Olson	Management Information Systems	2 nd	McGraw hill
5.	Jaiswal	Management Information Systems		Oxford

PUNJAB TECHNICAL UNIVERSITY

STRATEGIC MANAGEMENT (MB 401)

Max. Marks: 100

Internal Assessment: 40

External Assessment: 60

Unit I

Definition, nature, scope, and importance of strategy; and strategic management (Business policy). Strategic decision-making. Process of strategic management and levels at which strategy operates. Role of strategists.

Defining strategic intent: Vision, Mission, Business definition, Goals and Objectives.

Environmental Appraisal—Concept of environment, components of environment (Economic, legal, social, political and technological). Environmental scanning techniques- ETOP, QUEST and SWOT (TOWS) PEST.

Unit II

Internal Appraisal – The internal environment, organisational capabilities in various functional areas and Strategic Advantage Profile. Methods and techniques used for organisational appraisal (Value chain analysis, Financial and non financial analysis, historical analysis, Industry standards and benchmarking, Balanced scorecard and key factor rating). Identification of Critical Success Factors (CSF).

UNIT III

Corporate level strategies—Stability, Expansion, Retrenchment and Combination strategies. Corporate restructuring. Concept of Synergy.

Business level strategies—Porter’s framework of competitive strategies; Conditions, risks and benefits of Cost leadership, Differentiation and Focus strategies. Location and timing tactics. Concept, Importance, Building and use of Core Competence.

Strategic Analysis and choice—Corporate level analysis (BCG, GE Nine-cell, Hofer’s product market evolution and Shell Directional policy Matrix). Industry level analysis; Porters’s five forces model. Qualitative factors in strategic choice.

Unit IV

Strategy implementation: Resource allocation, Projects and Procedural issues. Organisation structure and systems in strategy implementation. Leadership and corporate culture, Values, Ethics and Social responsibility. Operational and derived functional plans to implement strategy. Integration of functional plans.

Strategic control and operational Control. Organisational systems and Techniques of strategic evaluation.

Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Kazmi	Business Policy & Strategic Management	2 nd	Tata McGraw Hill
2.	Thomson & Strickland	Strategic Management: Concept & Cases	12 th	Tata McGraw Hill

Reference Books

S.No	Author	Title	Edition	Publisher
1.	Ghemawat	Strategy & The Business Landscape	1 st	Pearson Education
2.	Ghoshal, Piramal & Budhiraja	World Class in India	1 st	Penguin
3.	Wheelen & Hungee	Strategic Management & Business Policy	6 th	Addison-Wesley
4.	Johnson & Scholes	Exploring Corporate Strategy	4 th	Prentice Hall India
5.	Jauch & Glueck	Business Policy & Strategic Management	5 th	Tata McGraw Hill
6.	Pearce & Robinson	Strategic Management	3 rd	AITBS
7.	Hitt	Management of strategy		Cengage
8.	Adrian Haberberg	Strategic Management Theory & Application		Oxford

PROJECT MANAGEMENT & ENTREPRENEURSHIP

MB 402	Max. Marks: 100 External Assessment: 60 Internal Assessment: 40
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UNIT – I

Entrepreneur: definition, characteristics and skills. Generating and screening of business ideas. Govt. support to entrepreneurs, Entering/buying and Exit/selling a business, Entrepreneurial finance: venture capital. Family business: Opportunities, and problems of small business in India.

UNIT – II

Project: Definition and characteristics. Demand analysis and technical analysis. Environment Impact Analysis, Managerial Appraisal.

UNIT – III

Estimating project cost, Sources of finance, Preparation of projected financial statements: Cash Flow Statement, Income Statement and Balance Sheet. Project Investment Criteria.

UNIT – IV

Risk analysis: Management risk, market risk, technical risk.
Introduction to social benefit cost analysis, UNIDO and LM approach.
Implementation: Project planning and control, project organization. Review and audit of Project cost and implementation time.

Reference Books:

1. Roy, Rajeev; Entrepreneurship; Oxford University Press.
2. Chandra, Prasanna ; Projects: Planning, Analysis Selection, Financing, Implementation and Review; Tata McGraw Hill.
3. Gido Effective project management Cengage
4. Twijandra Tripathi , The Concise Oxford History Of Indian Buisness , Oxford

**PUNJAB TECHNICAL UNIVERSITY
CONSUMER BEHAVIOUR (MB 901)**

**Max. Marks: 100
External Assessment: 60
Internal Assessment: 40**

Unit I

Introduction to Consumer Behaviour:

Consumer Behavior: Scope, importance and interdisciplinary nature

Consumer Research Process: Qualitative and Quantitative research

Market Segmentation: Uses and bases of segmentation

Evolution of Consumer Behaviour: Introduction to Consumer Decision Making

Models: Howard-Sheth, Engell Kollat-Blackwell and Nicosia Models of consumer decision-making

Unit II

Individual Determinants of Consumer Behaviour:

Motivation: Nature and Types of Motives, Process of motivation, Types of Needs

Personality: Theories, Product Personality, Self Concept, Vanity

Consumer Perception: Concept and Elements of Perception, Consumer Imagery, Perceived Risk

Consumer Learning: Behavioural and Cognitive Learning Theories

Consumer Attitude: Functions of Attitude and Sources of Attitude Development, Attitude formation Theories (Tricomponent, Multi attribute and Cognitive Dissonance), Attitude Change Strategies, Designing persuasive communications

Unit III

External Influences on Consumer Behaviour

Culture: Values and Norms, Characteristics and Affect on Consumer Behaviour, Types of sub culture, Cross cultural consumer behaviour

Group Dynamics and Reference Groups: Consumer relevant groups, Types of

Family: Functions of family, Family decision making, Family Life Cycle

Social Class: Categories, Measurement and Applications of Social Class

Unit IV

Consumer Decision Making Process

Personal Influence and Opinion Leadership: Process of Opinion Leadership, Profile of Opinion Leader, Opinion leadership and Firm's Promotional Strategy

Diffusion of innovations: Diffusion Process, Adoption Process, Profile of Consumer Innovator

Recommended Text Books:

1. Schiffman, L.G. and Kanuk, L.L., Consumer Behavior, Pearson education
2. Loudon, D. and Bitta, D., Consumer Behaviour, Tata Mc Graw Hill
3. Assael, H., Consumer Behaviour in Action, Cengage Learning

Reference Books:

1. Blackwell, R.D., Miniard, P.W. and Engel, J.F. , Consumer Behaviour, Cengage Learning

PUNJAB TECHNICAL UNIVERSITY
MARKETING RESEARCH

<u>MB 902</u>	Max. Marks: 100 Internal Assessment: 40 External Assessment: 60
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Unit I

Preliminaries:

Basic concepts of Marketing Research - Introduction
Marketing Research & MIS, Marketing Decision Support System.
Advanced Scaling Techniques: Scale Construction, Item Analysis, Scale Evaluation in terms of Reliability, Validity.
International Marketing Research

Unit II

Advanced Data Analysis I:

Multiple Regression
Discriminant Analysis
Conjoint Analysis

Unit III

Advanced Data Analysis II:

Multi Dimensional Scaling
Factor Analysis
Cluster Analysis

Unit IV

Applications of Marketing Research:

Sales Analysis, Market Potential Analysis, Sales Forecasting
Market Segmentation
Product Research: New Product Development Process, Test Marketing
Advertising Research: Media Research, Copy Testing
Brand Positioning
Motivation Research

Recommended Text Books:

S No.	Author	Title	Edition	Publisher
1.	Naresh Malhotra	Marketing Research: Applied Orientation	5th	Pearson
2.	Boyd, Westfall & Stasch	Marketing Research	8th	AITBS
3.	Luck & Rubin	Marketing Research	7th	Prentice Hall India
4.	Churchill & Iacobucci	Marketing Research: Methodological Foundations	9th	Thomson Learning
5.	Nigel Bradley	Marketing Research tools & techniques		Oxford
6.	Sunanda Easwaran	Marketing Research concepts, practices , and cases		Oxford

PUNJAB TECHNICAL UNIVERSITY
RETAIL AND SUPPLY CHAIN MANAGEMENT (MB903)

<u>MB 903</u>	Max. Marks: 100 Internal Assessment: 40 External Assessment: 60
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Unit I

Retailing: Definition, Scope, Economic significance, Opportunities in retailing, Types of retailers, Multichannel retailing including online retailing (E-tailing).
Customer Buying Behaviour in Retailing: Types of buying decisions, Buying process, Social factors influencing buying decisions in retailing.
Customer Relationship Management: CRM process, Analyzing customer data and identifying target customers, Developing and implementing CRM program.

Unit II

Retailing Strategy: Retail strategy, Target market and retail planning process, Financial strategy.
Retail Locations and Site Selection: Location opportunities, Factors affecting the site selection, Estimating demand for a new location.
Human Resource Management in Retailing: Gaining competitive advantage through HRM, Designing retail organization structure, Motivating retail employees.

Unit III

Merchandise Management: Planning merchandise, Buying merchandise, Pricing decision for merchandise.
Retail Communication Mix: Developing brands and building customer loyalty, Promotion strategy, planning a retail promotion strategy.
Store Management: Managing the store, Store layout, Design and visual merchandising.

Unit IV

Supply Chain Management: Evolution, Present need, Concept, Significance, Elements: Order processing, material handling, warehousing, inventory management, Reverse Logistics, Vendor evaluation, Supplier Service Policy (SSP), Purchase order processing (POP),
Transportation and Distribution Management – Optimization, Network Design, Shipment Planning, Container Fleet Management, Warehouse Operations.
Demand management, Operations management, Procurement management, Logistics management, Role of IT in supply chain management, Performance measurement and controls in supply chain management.

Books Recommended:

1. Levy, Weitz,& Pandit ,Retail Management, Tata McGraw Hill, New Delhi.
2. Barry Berman & Joel R Evans, Retail Management, PHI, New Delhi.
3. Rahul V Altekar, Supply Chain Management concepts and case, PHI, New Delhi.
4. Robert B Handfield and Ernest L Nichols, Supply Chain Management PHI, New Delhi.
5. Cullen Retailing : Environment and cases Cengage India
6. Chetan Bajaj & Rajneesh Tuli , Retail Management, Oxford
7. Tapan K Panda & Sahadev , Sales and Distribution Management , Oxford

PUNJAB TECHNICAL UNIVERSITY
ADVERTISING AND SALES MANAGEMENT (MB 904)

<u>MB 904</u>	Max. Marks: 100 Internal Assessment: 40 External Assessment: 60
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Unit I

Advertising: Definition, Nature, Scope, Objectives, Types, Social and Economic Aspect of Advertising, relationship with product life cycle.

Advertising as a communication Process: Concept of Integrated Marketing communication, AIDA Model, Laivdge–Stenier Model of communication.

Advertising Campaign: Types, Planning and Managing Advertising campaign, Advertising strategies.

Advertising Budget: Budget process, Administering the budget.

Unit II

Media: Types, Media Planning process, Media Selection, and Multi-Media Strategies.

Copywriting: Guidelines for copywriting, Copywriting for print, Audio, TV and outdoor media.

Advertising layout: Components and its position.

Evaluation of Advertisements: Measuring advertising effectiveness.

Advertising Agencies: Structure, Functions and Client Relationship, Laws and ethics of advertising in India.

Unit III

Sales Management: Objectives, Selling process, Personal Selling objectives, Determining Sales related marketing Policies.

Sales organization structures: Types of sales organization structure, Relationship of sales department with other departments, Distributive network relations.

Unit IV

Sales Force Management: Recruiting and selecting sales personnel, Training sales force Motivating Sales Personnel, Compensating Sales Personnel, Managing expenses of sales personnel, Staff meeting and Sales Contests.

Controlling the Sales Force: Sales Budget, Sales Quotas, Sales Territories, Sales control and cost analysis.

Books Recommended

1. Cundiff; Govoni & Still, Sales Management, Prentice Hall India.
2. Mark W. Johnston & Greg W. Marshall, Sales Force Management , Tata McGraw-Hill New Delhi.
3. Ingram, Sales management Cengage india
4. S.A. Chunawalla, Foundation of Advertisement Theory and Practices, Himalaya Publishing House, Mumbai.
5. B.S. Rathor, Advertising Management, Himalaya Publishing House, New Delhi.

PUNJAB TECHNICAL UNIVERSITY

RURAL MARKETING (MB 905)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit I

Rural Marketing: Nature, Definition, Scope, Importance, Challenges and Opportunities in India.

Factors influencing Rural Marketing: Socio-cultural factors, population, occupation, literacy level, land distribution & use, development programmes, infrastructure, communication media, credit availability, local requirements.

Rural Market: Size & structure, Segmentation of Indian rural market. Rural and Urban Market: A Comparative Analysis

Unit II

Rural Marketing Research: Rural Consumer Behaviour, Rural Market Mapping Rural Market Index: Thompson index. Market research (with special reference to seeds, fertilizers, farm equipments, new techniques, agricultural output & other services.)

Product and Service Marketing in Rural India: Rural Marketing Mix: Product Planning, New Product Development for Rural Markets, Brand Management in Rural Market and communication media & message, distribution channels, Rural Retail Channel Management

Marketing Strategies & Tactics with reference to rural markets: FMCGs, Consumer Durables, Services, Agricultural Inputs, Project Shakti of HUL, Project Haryali of Shri Ram

Marketing of agricultural produce, Rural Artisans' Products, Rural Industry: Marketing of rural industry, cottage industry, artisan products.

Cooperative Rural marketing & Processing societies.

Unit III

e-Rural Marketing: e-Choupal Model of ITC, IT for Sustainable Rural Development and E-Governance in rural market

Corporate Sector in Agri-business: Cultivation, Processing & Retailing
Organized Rural Retailing

Unit IV

Social Marketing: Corporate Social Responsibility and Rural Marketing

Consumer Education: Consumer Education and consumer movement in rural India.

Role of government in Rural Marketing.

Role of NGOs in Rural Marketing

Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Dogra, Ghuman	Rural Marketing	1 st	TATA McGraw-Hill
2.	Krishnamacharyulu & Ramakrishnan	Rural Marketing - Text & Cases	1 st	Pearson Education Asia

Reference Books

S.No	Author	Title	Edition	Publisher
1	Samiudin & Rehman	Rural Marketing		National Publishing House
2	Rajagopal	Indian Rural Marketing		Rawat Publishers
3	Sukhpal Singh	Rural Marketing Manage	1 st	Vikas

PUNJAB TECHNICAL UNIVERSITY
SERVICES MARKETING (MB-906)

Unit I

Introduction to Services, Growth of service sector economy, Service Characteristics, Service Classification, Service Marketing Mix.

Consumer Behaviour in Services: Customer Expectation of Service, Customer Perceptions of Service.

Unit II

Building Customer Relationships.

Service recovery and recovery strategies

Service development and design: Challenges of service design, types of new services , New service development process.

Physical evidence and the Servicescapes

Unit III

Delivering and performing service through Employees, Intermediaries and Customer Participation.

Managing Demand and Capacity, Waiting Line Strategies

Integrated Services Marketing Communications and Services marketing triangle.

Unit IV

Pricing of services: Pricing approaches, Pricing Strategies

Service Quality: Integrated gaps model of service quality.

Prescriptions for closing quality gaps.

Recommended Text Books

Sr. Author	Books	Publisher
1. Zeithmal A Valarie and Bitner Mary,	Services Marketing,	Tata McGraw Hill, New Delhi.
2. Lovelock, Christopher H.	Services Marketing ,	Pearson Education , New Delhi
3 Hoffman Soutwesten	Marketing of services	Thomson
4. Govind Apte	Service Marketing	Oxford

**PUNJAB TECHNICAL UNIVERSITY
INTERNATIONAL MARKETING (MB 907)**

**Max. Marks: 100
External Assessment: 60
Internal Assessment: 40**

Unit I

Definition, scope and challenges of international marketing.
International trade theories.
Reasons for going international.

Unit II

International Marketing Environment: Political, Legal, Environmental, Socio Cultural and Technological environment, Country Risk Analysis.
International Economic Environment: IMF, WTO
International Monetary System
International Trade Barriers: Tariff and Non Tariff
Regional Blocks: European Union, NAFTA, SAARC, ASEAN, MERCOSUR

Unit III

International Marketing Research.
Selection of export markets.
Forms of international market entry: Indirect and direct methods.
International product policy: Product standardisation & adaptation, international product mix, International product life cycle, export packaging.
International pricing policy: Factors influencing selection of pricing policies, international pricing strategies.
International distribution policy: Factors influencing selection of international distribution channels, types of international distribution channels, role of internet in international distribution
International communication policy: communication strategies in international marketing, international promotion mix.

Unit IV

Direction & composition of Indian exports.
Indian export and import policy export promotion organizations, export incentives.
Producing for exports, export quality control; export finance, shipment and procedures thereof.
Export documents, processing of an export order, organisation and structure of export and import houses.

Recommended Text Books:

1. Onkvisit, S. & Shaw, J., International Marketing: Analysis & Strategy, Pearson
2. Czinkota, M., Ronkainen, I., Sutton Brady, C. and Beal, T. International Marketing, Cengage Learning.

3. Cherunilam, F., International Trade & Export Management, Himalaya.
4. Cateora & Graham, International Marketing, McGraw Hill.

Reference Books:

1. Keegan, Global Marketing Management, Pearson Education Asia.
2. Daniels, J. International Business, Pearson Education.
3. Cherunilam, International Marketing, Himalaya Publishing.
4. Rakesh Mohan Joshi, International Marketing , Oxford
5. Paul Justin , Export Import Management , Oxford

PUNJAB TECHNICAL UNIVERSITY

SECURITY ANALYSIS & PORTFOLIO MANAGEMENT (MB 921)

	Max. Marks: 100 External Assessment: 60 Internal Assessment: 40
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Unit - I

Investment management: objective, investment opportunities, and philosophy of individual & institutional investors.

Fundamental analysis: concept & significance of economic analysis, industry analysis: introduction, need for industry analysis, alternative classification of industry, industry life cycle analysis, economic factors & industry analysis, SWOT analysis for industries.

Company analysis - nature and style of management, key role of financial analysis, ratio analysis.

Unit - II

Technical analysis - different techniques of analysis, DOW theory, volume indicators, market sentiment indicators, confidence indicators, points & figure charting, bar charting.

Efficient market theory random walk: weak form, semi-strong, strong form of market.

Empirical tests. Comparison of random walk, technical & fundamental analysis.

Unit - III

Portfolio analysis selection: portfolio theory, return portfolio risk, efficient set of portfolios, optimum portfolio, capital asset pricing theory (CAPM), capital market line, security market line, corporate portfolio management in India, portfolio revision techniques, constant value & constant ration plan, formula plan, dollar cost averaging.

Unit - IV

Options & futures: concept of derivatives, option trading, option contracts settlement, pricing of option futures, concept of futures, characteristics of future contract, its types, difference between future, options, forwards & badla contracts.

Recommended Text Books:

S.No	Author	Title	Publisher
1.	Prasanna	Investment Management	Tata McGraw-Hill

- Chandra
2. Fischer & Jordan Security Analysis & Portfolio Management Pearson Education
 3. Robert Haugen Modern Investment Theory Prentice Hall India
 4. V.K. Bhalla Investment Management: Security Analysis and Portfolio Management S. Chand
 5. Sharpe, Alexander, Bailey Investments Prentice Hall
 6. Bodie, Kane, Marcus, Mohanty Investments Tata McGraw-Hill
 7. Reilly & Brown Investment Analysis & Portfolio Management Cengage

**PUNJAB TECHNICAL UNIVERSITY
DIRECT TAX PLANNING (MB 922)**

**Max. Marks: 100
External Assessment: 60
Internal Assessment: 40**

Unit - I

Basic definitions under income tax act & determination of residential status, Exempted Incomes.

Individual Taxation: Income from salary, tax planning relating to employee's remuneration, Income from house property and tax planning.

Unit - II

Income from business & profession, Capital gains, Income from other sources, tax planning under relevant heads.

Clubbing provisions, Set off and carry forward of losses, Deductions out of GTI, Rates of tax & computation of tax liability of individuals, Tax planning relating to individuals in general.

Unit - III

Corporate Taxation: MAT provisions.

Introduction to TDS and payment of Advance Tax, Double Taxation Avoidance Agreements.

Concepts of tax planning, tax evasion & tax avoidance; importance & scope of tax planning.

Unit - IV

Tax planning relating to following areas: Ownership pattern, Location of Business, Nature of Business, Dividend policy, issue of bonus shares, inter corporate dividends, Amalgamation and merger of companies. Managerial decisions like make or buy, own or lease, close or continue, export or local sales, replace or repair, Foreign collaborations and joint ventures.

Tax planning under Wealth Tax Law.

Recommended Text Books:

S.No	Author	Title	Publisher
1	Girish Ahuja & Ravi Gupta	Corporate Tax Planning & Management Direct Taxes Ready Reckoner	Bharat Law House Pvt. Ltd.
2.	Dr Vinod K. Singhania, Kapil Singhania, Monica Singhania	Direct Taxes Planning & Management Direct Taxes Ready Reckoner	Taxmann's Publication Pvt. Ltd.

Reference Books:

S.No	Author	Title	Publisher
1.	Bhagwati Prasad	Direct Taxes – Law & Practice	Wishwa Parkashan
2.	Dr. Vinod K. Singhania, Kapil Singhania, Monica Singhania	Direct Taxes – Law & Practice	Taxmann’s Publication Pvt. Ltd.,
3.	R.N. Lakhotia, Subhash Lakhotia	Corporate Tax Planning	Vision Books

PUNJAB TECHNICAL UNIVERSITY
STRATEGIC FINANCIAL MANAGEMENT (MB 923)

Max. Marks - 100

External assessment - 60

Internal Assessment - 40

Unit - I

Financial Policy and Strategic Planning: Components of financial strategy; Objectives and goals; Strategic planning process. Portfolio Tools, Mean-Variance Analysis and Capital asset pricing model, Factor models and Arbitrage Pricing Theory.

Unit - II

Investments Decisions under Risk and Uncertainty: Techniques of investment decision- risk adjusted discount rate, certainty equivalent factor, statistical method, sensitivity analysis and simulation method; Corporate strategy and high technology investments.

Unit - III

Financial analysis and planning, Financial models, Forecasting Financial Statements, Cross sectional analysis of financial statement information, Control, governance and financial architecture.
Corporate Valuation and Value Based Management

Unit - IV

Expansion and Financial Restructuring: Mergers and amalgamations - corporate restructuring, Buy-back of shares, LBO, Sell-off, Spin-off, Demerger and reverse merger, reasons for merger, legal procedure for merger, benefits and cost of merger; Determination of swap ratios; Evaluation of merger proposal; Corporate and distress restructuring.

Recommended Books:

1. Allen, D: An Introduction to Strategic Financial Management, CIMA/Kogan Page, London.
2. Chandra, Prasanna: Financial Management, Tata McGraw Hill, Delhi.
3. Copeland, T., Koller, T and Murrin, J: Valuation: Measuring and Managing the value of Companies, John Wiley, International Edition, New York.
4. Copeland, T.E. and Weston, J.F: Financial Theory and Corporate Policy, Addison-Wesley, New York.
5. Hampton, Jone: Financial Decision Making, PHI, New Delhi.
6. Kaplan, Robert S., and Cooper, Robin: Cost & effect: using integrated cost systems to drive profitability and performance, Harvard Business Press.
7. Grinblatt, Mark and Titman, Sheridan: Financial Markets and Corporate Strategy, Tata McGraw Hill.
8. Foster, George: Financial Statement Analysis, Pearson Education.
9. Brealey, Richard A. and Myers, Stewart C.: Principles of corporate finance, Tata McGraw Hill.

PUNJAB TECHNICAL UNIVERSITY
MANAGEMENT OF FINANCIAL SERVICES (MB 924)

	Max. Marks: 100 External Assessment : 60 Internal Assessment : 40
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Unit - I

Financial Services - Meaning, types and their importance.

Securities Trading - Online Vs Offline Trading, Demat and Remat.

Depository - Introduction, Concept, depository participants, functioning of depository systems, process of switching over to depository systems, benefits, depository systems in India, SEBI regulation.

Unit - II

Mutual funds and AMCs - concept, origin and growth of mutual funds, Constitution & management of MFs - Sponsors, Trustees, AMCs, and custodians. Classification of mutual fund schemes, advantages and disadvantages in mutual fund schemes, NAV and pricing of mutual fund units. State of mutual funds in India.

Insurance Services- Introduction, Principles of insurance, Types of Insurance.

Life Insurance Products- Traditional and ULIPs.

Credit rating - the concept and objective of credit rating, various credit rating agencies in India and International credit rating agencies, factors affecting credit rating & procedural aspects.

Unit - III

Leasing - concept and development of leasing, business, difference between leasing & hire purchase, types of leasing business, advantages to lessor and lessee.

Merchant Banking - Origin and development of merchant banking in India scope, organisational aspects and importance of merchant bankers. Latest guidelines of SEBI w.r.t Merchant bankers.

Venture capital - concepts and characteristics of venture capital, venture capital in India, guidelines for venture capital.

Unit - IV

Call money market, Treasury bill market, Commercial Bill market, Market for CPs and CDs, Discount market and market for financial guarantees.

Factoring - Development of factoring types & importance, procedural aspects in factoring, financial aspects, prospects of factoring in India.

Plastic Money - Concept and different forms of plastic money - credit and debit cards, pros and cons. Credit process followed by credit card organisations. Factors affecting utilisation of plastic money in India.

Recommended Text Books:

S.No	Author	Title	Publisher
1.	E.Gordon & K. Natarajan	Financial Markets & Services	Himalaya

2.	Lalit K.Bansal	Merchant banking & Financial Services	Unistar Books
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Suggested Readings:

S.No	Author	Title	Publisher
1.	S Gurusamy	Financial services & system	McGraw-Hill
2.	Nalini P T	Financial Instruments and services	PHI
3.	M Y Khan	Financial Services	Tata McGraw-Hill
4.	L M Bhole	Financial Institutions & Markets	Tata McGraw-Hill
5.	Lalit K. Bansal	Merchant Banking & Financial Services	Unistar Books
6.	Gordon & Natarajan	Financial Markets & Services	Himalaya
7.	Rajiv Srivastva	Financial Management	Oxford

PUNJAB TECHNICAL UNIVERSITY
INTERNATIONAL FINANCE (MB 925)

	Max. Marks: 100 External Assessment: 60 Internal Assessment: 40
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Unit - I

International Finance: concept & role of international finance manager in multinational corporations.

International financial environment: international transactions & financial market, trade & capital flow, inflation, exchange control & currency devaluation, expropriation etc. Different types of risks: country risk analysis.

Unit - II

Foreign direct investment & foreign institutional investment foreign collaboration trends since liberalisation. Financial operations of multinational corporation: sources & investment: short, medium & long term national currency financing foreign currency financing, regional & national development finance, private investment companies, Multilateral financial institution : WB/IMF, ADB. Export & import financing: role of commercial banks. Basic instruments, private non-bank sources of finance.

Unit - III

Financial innovation & risk sharing: introduction, futures markets in growing world, financial future trading, role of financial futures, swap markets, basic swap structure, interest rate, fixed rates currency, currency coupon, types.

International stock exchanges: New York, London, Luxemburg, third world and Asian stock exchanges: working and their influences, the securities market, bond market, foreign portfolio investment.

Unit - IV

New developments in international finance: country funds, ADR, GDR, EURO issues, ECBs, their process of issue, benefits, limitations & specific guidelines issued by Foreign Investment Promotion Board (FIPB).

International financial investment strategies and regulations for Indian Companies. FEMA.

Recommended Text Books:

S.No	Author	Title	Publisher
1.	V. Sharan	International Financial Management	PrenticeHall India
2.	Maurice D. Levi	International Finance	Routledge

Reference Books:

S.No	Author	Title	Publisher
1.	Madhu Vij	International Finance	Excel Books
2.	P.G. Apte	International Financial Management	Tata McGraw Hill
3.	V.K. Bhalla	Management Text & Cases	Anmol Publications
4.	Thomas J. Obrien	International Finance	Oxford

PUNJAB TECHNICAL UNIVERSITY
MANAGEMENT CONTROL SYSTEM (MB 926)

Max. Marks - 100

External assessment - 60

Internal Assessment - 40

Unit - I

Management Control System: Basic concepts, nature and scope. Control environment – Concept of goals and strategies. Behavioural considerations.

Unit - II

Responsibility Centers: Revenue and expense centers, Profit centers, Investment centers.

Transfer Pricing: Objectives and methods.

Unit - III

Budgeting: Budget preparation, Types of budgets, Behavioral aspects of budgets. Variance analysis and reporting.

Unit - IV

Performance analysis and measurement, Impact on management compensation. Modern control methods: JIT, TQM and DSS. Control in service organizations, Control in multinational corporations.

Recommended Text Books:

S.No	Author	Title	Publisher
1.	Robert N. Anthony & Vijay Govindraján	Management Control Systems	TMH

Reference Books:

S.No	Author	Title	Publisher
1.	Joseph A. Maciariello/Calvin J. Kirbi	Management Control Systems	PHI
2.	P. Saravanavel	Management Control Systems (Principles & Practice)	HPH
3.	Kenneth A. Merchant	Modern Management Control systems: Text & Cases	Pearson
4.	Horngren, Foster, Datar	Cost Accounting	PHI

FINANCIAL ENGINEERING (MB 927)

Max. Marks – 100

External assessment – 60

Internal Assessment – 40

Unit - I

Overview - Meaning, scope, tools used in financial engineering, difference between financial engineering and financial analysis. Growth and Contributory factors to Growth of Financial Engineering.

Skills and Knowledge Required: Statistical, Modeling, Technology, Legal, Accounting and Taxation.

Unit - II

Determinations of value of financial instruments and products. Time value of money, the required rate of return. Absolute valuations versus relative valuation. Measuring return and risk. Portfolio consideration and investment horizons. Speculation, arbitrage and market efficiency.

Unit - III

Derivatives: Types and uses; Basic Principles of options, Option trading strategies, Option pricing – Black Scholes Model, Option Greeks.

Unit - IV

Forwards and futures: Basics & Types; Swap; Other derivative assets: futures options, warrants, forward rate agreement, swaptions, exotic options, credit derivatives.

Risk Management and corporate strategy, the practice of hedging, Interest rate risk management.

Recommended Books:

1. Hull, John C.: Options, Futures and Other Derivatives, Pearson Education
2. Walmsley, Julian: New Financial Instruments, Wiley Frontiers in Finance
3. Marshall, John F. and Bansal, Vipul K.: Financial Engineering, Prentice Hall of India
4. Grinblatt, Mark and Titman, Sheridan: Financial Markets and Corporate Strategy, Tata McGraw Hill
5. Sharpe, William F.: Investments, Prentice Hall of India
6. Strong, Robert A.: Derivatives – An Introduction, Thomson South-Western
7. Kumar, S.S.S: Financial Derivatives, Prentice Hall of India
8. S. Thomas, Security Evaluation , Oxford

PUNJAB TECHNICAL UNIVERSITY

PRODUCTION PLANNING & CONTROL (MB-941)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT-1

Production Planning & Control: Importance, Objectives, Functions
Types of Production Systems. Production Procedure: Production Cycle, Planning & Control in the Production Procedure. Production Organization: Organization Structure, Sections of Planning & Control Department.
Product Selection, Process Selection, Plant Location, Plant Layout, Operations Capacity Planning.

UNIT-2

Production Order: Process Charts, Production Master Programmes, Operation & Route Sheets, Breakdown of the Production Order & preparation of various Cards. Production Planning: Operations Planning and Scheduling Systems, Aggregate Planning Process, Strategies for Aggregate Planning, Disaggregation of Aggregate Plans, Master Production Schedule (MPS), Material Requirement Planning (MRP), Rough Cut Capacity Planning.

UNIT-3

Production Control: Machine Loading; Infinite and Finite Loading, Gantt Load Chart, Visual Load Profiles; Detailed Scheduling: Gantt Scheduling Chart, Forward and Backward Scheduling, Forms Schedules, Inputs of Schedule, Drawing a Job Schedule, Factors influencing Scheduling, Procedure Scheduling, Reducing Scheduling Problems; Dispatching; Expediting; recording Progress; Input / Output Control.

UNIT-4

Production Control for Mass Production: Design of Production Line, Assembly Line Balancing. Production Control for Batch production: Inventory Control for Single and Multiple Products, Line of Balance.

Production control for Job Shop Production: Jumbled Flow in a Job Shop, Job Sequencing for Machine Limited Scheduling Systems, Job Sequencing for Men and Machine Limited Scheduling Systems.

Recommended Texts:

Sr.	Author	Book
1.	L.N. Aggarwal & Parag Diw	Management of Production System
2.	Adam & Ebert	Production & Operations Management
3.	Dilworth James B.	Production & Operations Management
4.	Eilon Samuel	Elements of Production Planning & Control
5.	N.G. Nair	Production and Operations Management

Suggested References:

Sr.	Author	Books
1.	P. John Collary Jr, Robbert D. Landel, Robert Fair	Production Operation Planning & Control
2.	Busbridge	Principles & Production Control

PUNJAB TECHNICAL UNIVERSITY

PURCHASING MANAGEMENT (MB-942)

Max. Marks: 100

External Assessment: 60

Internal Assessment: 40

UNIT-1

Role, Profit Centre Concept, Objectives
Make or Buy Decisions, Materials Planning, Materials Codification: Evolution of Codes, Classification, Methodology, Advantages. Standardization: Definition, Specification, Advantages, Techniques
Value Analysis: Concept, Organisation for Value Analysis, Application, Techniques, Steps for Value Analysis

UNIT-2

Spares Part Management: Inventory Problems, Inventory Control, Categorization, Pricing Factors Purchasing Functions, Relationship of Purchasing Department with other Departments, Procurement, Supply Management Activities, Purchasing Objectives and Policies Operating Procedures, Purchasing Cycles

UNIT-3

Supply Sources: Importance of Source Selection, Vendor Development & Maintenance, Vendor Rating, Competitive Bidding, Selecting the Source.
Pricing Principles: Economic Consideration in Determining the Right Price, Price Analysis, Discounts.

UNIT-4

Cost Analysis: Elements of Affecting Costs, Sources of Cost Data, Direct & Indirect Costs, Target Costing.
Negotiation: Objectives, Process, Techniques, Price Negotiation
Contract Management. Import Substitution Public Buying Traffic: Transportation Cost, Shipping Terms, Modes of Transportation, Loss and Damage of Freight, Demurrage, Transportation Strategy and Cost reduction

Recommended Texts:

1. Dobler & Burt : Purchasing & Supply Management
2. P. Gopala Krishan : Purchasing & Materials Management

References:

1. L.N. Aggarwal & Parag Diwan : Management & Production Systems
2. N.G. Nair: Production & Operations Management

PUNJAB TECHNICAL UNIVERSITY

INVENTORY MANAGEMENT (MB-943)

Max. Marks : 100

External Assessment : 60

Internal Assessment : 40

UNIT-1

Inventory: Concept, Inventory Classification, Functions of Inventory, Advantages and Disadvantages of Inventory.

Inventory Control: Objectives, Factors affecting Inventory, Control Policy, Inventory Costs, Material Requirement Planning (MRP), MRP Objectives & Methods, MRP System Components, Limitations and Advantages of MRP.

UNIT-2

Factors affecting Stock levels, Maximum and Minimum Level, Order Point, Re-order Level, Perpetual Inventory System, Lead Time, Economic Order Quantity (EOQ), BASIC EOQ Model, Safety or Buffer Stock, Feedback Inventory Information System.

Selecting Inventory Control Techniques: ABC Analysis, HML Analysis VED Analysis, SDE, GOLF, FSN SOS XYZ Classification.

Just in Time (JIT)

UNIT-3

Inventory Models: Static, Dynamic and Deterministic Models

Probabilistic Models: Determination of EOQ under various conditions of Demand and Lead-Time Analysis.

Stores Management: Store Objectives, Receiving Procedures and Control, Identification of Materials, Stores system and Procedures Classification and Codification, Standardisation, Storing of Materials, Stores Location and Layout, Preservation, Issue Control, Stores Documentation. Stock Valuation Methods and Stock Verification.

UNIT-4

Material Handling : Choice of Equipments, Evaluation of Material Handling, Cost Reduction Methods.

Traffic : Transportation cost, Shipping terms, Model of transportation, Loss and damage of Freight Demurrage, Transportation Strategy and Cost Reduction.

Waste management : Sources of Surplus, Disposal of Surplus, Buying Surplus Material

Recommended Texts:

Sr	Author	Books
1.	Gopal Krishan & Sandelya	Inventory Management
2.	Narasimhan. McLeavey, Billington	Production Planning & Inventory Control
3.	Dobler & Burt	Purchasing and Supply Management
4.	Adam & Ebert	Production and Operations Management
5.	L.N.Aggarwal & Parag Diwan	Management of Production System

Recommended References:

Sr	Author	Books
1.	Buffa & Taubert	Production Inventory Systems : Planning & Control

PUNJAB TECHNICAL UNIVERSITY

QUALITY MANAGEMENT (MB-944)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT-1

Quality - Concepts, Role of Quality in Changing Business Conditions, Contributions of Deming, Juran, Philip Crosby, Kaizen, Trade off between Quality Costs and Schedules, Quality Costs and its Analysis, Life Cycle Costs, Difference between Inspection, Quality Control, Quality Assurance and Total Quality Management, Quality Problems and Causes,

UNIT-2

Pareto Analysis, Ishikawa Cause and Effect Diagnosis. Quality Control - Control of Quality, Statistical Process Control, Control Charts, Acceptance Sampling.

UNIT-3

Strategic Quality Management Quality Management in Marketing Quality Management in Designing Quality Management in Manufacturing Quality Management in Suppliers Quality Management System

UNIT-4

Total Quality Management - Concepts, Organization for Quality, Developing a Quality Culture.
Quality Certification - Quality Assurance, ISO 9000 Series Concepts and Procedure

Recommended Texts:

Sr.	Author	Books
1.	Juran, J.M. & Gryna, P.M.	Quality Planning & Analysis
2.	Logothetis, N.	Total Quality Control

Suggesting

Sr.	Author	Books
1.	Chandra	Quality Circles
2.	Bounds	Total Quality Management
3.	Eugene Grant	Statistical Quality Control

PUNJAB TECHNICAL UNIVERSITY

TECHNOLOGY MANAGEMENT (MB-945)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT-1

Management of Technology: Various aspects and Issues, Strategic Considerations, Technological change and Innovation, Impact of Technological Change on Employment and Productivity, Social consequences.

UNIT-2

Technology Forecasting, Technology Development, Acquisition and Transfer. Technology Absorption and Diffusion, Evaluation/Assessment of competing Technologies, Foreign Diffusion, Collaboration and Strategic Technological Alliances.

UNIT-3

Law regarding protection of trade intellectual property rights, patents, trade marks; TRIPS and W.T.O. - its impact on Indian Economy.

UNIT-4

Technological environment in India - Technology policy, role of various government, organisations such as DST, CSIR in development and dissemination of technology. Technology development at organisation level, role of information system, quality systems and market feedback.

REFERENCES:

1. Sharif Nawaz Management of Technology Transfer APCTT Bangalore.
and Technology
2. Fredruck Betz Managing Technology, Prentice Hall
3. Mauk Dudgeon Technology Strategy and the Firm, Longman Publications
4. UN-ESCAP Technology for Development, ESCAP Secretariat.

PUNJAB TECHNICAL UNIVERSITY

MANUFACTURING POLICY & IMPLEMENTATION (MB-946)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT-1

Production function: Production function & the organisation, Five Ps of production, Production Strategy, Planning & Controlling the Operations - Product Selection Linking the product with marketing, Planning the Operation, Setting up Production System, Controlling the Production.

UNIT-2

Manufacturing System Design: Organisation of Manufacturing Operation, job batch and flow production methods; Group Technology - coding composite component, Product flow analysis, Group Technology and Just-In-Time.

Just-In-Time Manufacturing: JIT manufacturing, People Involvement, total Quality Control, Advantage of JIT Manufacturing, Elements that support JIT flow. The KANBAN System, Optimised Production Technology (OPT).

UNIT-3

Manufacturing & Service Strategies: Manufacturing as a competitive advantage, Corporate Strategy & Manufacturing Strategy, Production Planning and Inventory Control in Manufacturing Strategy.

Theory of Constraints & Synchronous Manufacturing: Introduction, Theory of Constraints, The Goal of Performance Measures, Synchronous Manufacturing, Speed to Market, Bench Marking, Simultaneous Engineering, Reverse Engineering, Technology Audit, Strategic Alliances.

UNIT-4

Technological Innovation in Manufacturing: Automated Design Support, Computer Aided Manufacturing (CAM), Flexible Manufacturing System (FMS), Computer Integrated Manufacturing (CIM). Artificial Intelligence (AI), Automation in Services.

REFERENCES:

1. Narasimhan Mcleavey, Billington Production Planning & Inventory Control
2. James B. Dilwort Production & Operations Management
3. Muchbevan Dekland & Lecky Production & Operations Management

PUNJAB TECHNICAL UNIVERSITY
Social Security & Labour Welfare MB- (961)

Max Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT- I

The concept of scope of social security. Social assistance and social insurance
Evolution of Social Security. Law relating to social security
Payment of wages Act,1936

UNIT-II

Minimum Wages Act, 1948
Payment of Bonus Act, 1965
Workman's Compensation Act,1923
Maternity Benefit Act,1961

UNIT-III

Employment State Insurance Act,1948
Provident Fund & Miscellaneous Provision Act,1951
Gratuity Act,1972
I.L.O and social Security
The concept of Labour welfare: definition, Scope and Objectives, welfare work
and social work

UNIT-IV

Evolution of labour welfare ,classification of welfare work, agencies for welfare
work.
Welfare activities of govt. of India; welfare work by trade unions Labour welfare
work by voluntary social organizations. Labour administration; agencies for
administrating labour welfare laws in India.

Sr.No.	Author	Title	Publisher
1.	A.M.Sharma	Social, Security Labour Welfare	Himalayas Publishing House
2.	I.L.O	Social Security, International labour Office	

PUNJAB TECHNICAL UNIVERSITY
Training & Development (MB-962)

Max Marks: 100

External Assessment:

60

Internal Assessment: 40

UNIT- I

Training and Development : Process and significant, Principal of learning
Identification of Training Needs, Evolving Training Policy

UNIT-II

Training and Development System, Training Methods, Training Centers, Role of
External Agency in Training and Development , Training for change, Resistance
in Training.

UNIT-III

Developing effective Trainers, Designing training programmers. Approaches to
Management Development, Designing Development Programmers, Team
Building Exercises, Management Games.

UNIT-IV

Evaluation of Training and Development, Criteria, Problem and Steps involved
in Evaluation. Emerging issues in Training and Development in India

Suggested Readings:

Sr.No.	Author	Title	Publisher
1.	Armstrong M.A.	Handbook of Human Resource Management Practice Cogan Page, London	
2.	Dayal ,I	Manpower Training in organizations Prentice Hall of India, New Delhi	
3.	Craig ,Robert	Training and Development Handbook McGraw Hill, New York	
4.	Lynton,R.P and U.Pareek	Training and Development irwine Doresy, Hopwood	

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (MB 963)

<u>MB 963</u>	Max. Marks: 100 External Assessment: 60 Internal Assessment: 40
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Unit I

Introduction: Nature, Scope, and Problems; Brief history of industrial and organizational psychology.
Individual differences and their evaluation, Role of heredity and environment, Types of individual differences.

Unit II

Psychological testing: Utility, Reliability, and Validity.
Attitudes: Meaning, Characteristics, Methods of measuring attitudes, Implication for organization.

Unit III

Hawthorne Studies: The studies and their implications
Industrial Morale: Meaning, Characteristics, Factors that influence morale, Measures of improving morale.

Unit IV

Motivation: Meaning, Types, Applications: Job redesign, Work on incentives.
Characteristics of the workplace: Physical working conditions: Noise, Illumination, Colour, Music, Miscellaneous Factors; Work Schedules: Working Hours, Permanent Part-Time Employment, Flexible Work Schedules, Rest Pauses, and Shift Work; Psychological and Social Issues: Job Simplification, Boredom & Monotony, Fatigue, and Telecommuting.

RECOMMENDED TEXT BOOKS:

S.No	Author	Title	Edition	Publisher
1.	M.L. Blum & J.C. Naylor	Industrial Psychology (Its Theoretical & Social Foundations)		CBS
2.	Schultz & Schultz	Psychology and Work Today	8 th	Pearson
3.	Ghosh,P.K. & Ghorpade, M.B.	Industrial Psychology		Himalaya
4.	Michael G. Aamodt	Industrial/Organizational Psychology		Cengage
5.	Paul M.	Psychology Applied to		Cengage

Muchinsky Work

REFERENCE BOOKS:

S.No	Author	Title	Edition	Publisher
1.	Miner, J.B.	Industrial-Organisation Psychology	-	Tata McGraw Hill
2.	Riggio	Industrial/Organisational Psychology	5th	Pearson
3.	Dubrin	Applying Psychology: Industrial & Organisation Effectiveness	5th	Pearson

PUNJAB TECHNICAL UNIVERSITY
Industrial Relations and Labour Laws (MB-(964))

UNIT-I

Industrial Relations-Concept , Theories and Evolution.
System approach to IR-Actors, Context, Web of Rules & Ideology
Trade UNIONSIM, impact of trade unions on wages
The Trade unions Act ,1926 {with amendments}

UNIT-II

Grievance Handling
Tripartite and bipartite bodies
Anatomy of Industrial disputes.
Conciliation , arbitration and adjudication

UNIT-III

Collective Bargaining : Concept, meaning and objectives.
Approaches, technique & Strategies to collective Bargaining
Process of Collective Bargaining
Impact of CB and workers participation in management on IR

UNIT-IV

Industrial relations in UK & USA, Japan & Russia
The industrial Disputes Act,1947{with amendments}
Factories Act{with amendments}

Reference:

Sr.	Author	Title	Publisher
1.	Johan.T.Dunlop	Industrial System	
2.	Arun Monappa	Industrial Relations	Tata McGraw Hill
3.	Mamoria & Mamoria	Dynamic of Industrial Realties in Indai	Himalaya Publishing House
4.	Blain Pane	International Encyclopedia of Industrial Relations	
5.	Clark Kler	Labour &Managemnt in Industrial society	
6.	C.N.Patil	Collective Barganing	University Press
7.	S.C.Srivastava	Industrial Relation & Labour Laws	
8.	C.K. Venkata Ratna	Industrial Relations	Oxford
9.		Report of National Commission on Labour ,1969	

PUNJAB TECHNICAL UNIVERSITY
OrganizationAL Development (MB-965)

Max.Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit-I

Introduction to OD; Definitions & its distinguishing characteristics
Historical background: various stages, second-generation OD and extent of application, values, assumptions and beliefs in OD.
Foundations of OD: Models and theories of planned change, Systems theory, Participation and empowerment, Teams and teamwork, Parallel learning structures, Strategies of change.

Unit-II

Action Research and OD
Action research: a process and an approach
Managing OD Process: Diagnosis, The Six-Box Model, Third Waves Consulting, Nature of OD intervention, Analysis of discrepancies, Phases of OD program, Model of Managing change, Creating parallel learning structures.

Unit-III

OD Interventions: AN overview
Team Interventions,
Intergroup and third party peace making interventions,
Comprehensive interventions,
Structural interventions.
Training Experience: T-groups, Behavioral Modeling and Career anchors.

Unit-IV

Issue in Consultant-Client Relations: Entry and contracting, defining the client system, trust, the nature of the consultant's expertise, diagnosis and appropriate interventions, depth of intervention, on being absorbed by the cultural, the consultant as a model, the consultant team as a microcosm, the dependency issue and terminating the relationship, ethical standards in OD,
Implications of OD for the client.
Power, politics and OD: Power defined and explored, theories about the sources of social power, Organizational politics in the practice of OD. Research on OD: Some issues and problems, Positive development in research on OD.
The future of OD: Fundamental strengths of OD, OD's future" leadership & value, knowledge about OD, OD training, inter-disciplinary nature of OD, OD's future: Leadership & value, knowledge about OD, OD training, inter-disciplinary nature of OD, diffusion of technique, integration practice.

Recommended Textbooks:

S.No.	Author	Title	Publisher
1	Richard Beckhard	Organization Development Strategies & Models	Tata MC Graw Hill
2	Wendeel L. French, Cecil H. Bell	Organization Development	Pearson
3	Blake, Robert & Mouton	Building a Dynamic Corporate through Grid OD	
4	Thomas H, Patten	Organization Development through Team Building	
5	Edgar F. Huse	Organization Development & Change	
6.	Burke W.W.	Organization Development principles & Practice	
7		Sprucing up the organization Indian Management Vol. 36, Dec, 1997	

PUNJAB TECHNICAL UNIVERSITY

PERFORMANCE & COMPENSATION MANAGEMENT (MB-966)

Max. Marks 100
External Marks: 60
Internal Marks: 40

UNIT-I

Introduction to compensation Management, Compensation Philosophies, Determination of inter and intra industry compensation Differentials
Compensation and its components, Pay Structure, Internal Equity and External Equity in Compensation Systems.

UNIT-II

Process of Compensation management
Concept and Process of Performance Management, Performance Appraisal, Potential Appraisal, Methods of Performance Appraisal

UNIT-III

Performance Based Pay, Skills and Competency
Concept and Types of Incentive System: Individual and Group Incentive plans.

UNIT-IV

Statutory Provision governing different components of Reward system.
Institutions related to Reward System: Wage Boards, Pay Commissions.

Recommended Books

S.No.	Author	Title	Publisher
1	Richard Henderson	Compensation Management	Pearson
2	Armstrong, Michel and Murks Hellen	Reward Management - A handbook of Salary Administration	Kogan Paul, London
3	Bergess Lenard R	Wage and Salary Administration	Charles E. Merrill, London
4	Sud D.C	Incentives Industry	Tata Mc Graw Hill

PUNJAB TECHNICAL UNIVERSITY
INTERNATIONAL HUMAN RESOURCE
MANAGEMENT (MB-967)

Max Marks: 100
External Assessment: 60
Internal Assessment: 40

UNIT- I

Introduction to cross cultural management: Significance of Culture for International Management. Culture dimensions, impact of cross culture on organizations, role of culture in Strategic Decision- Making . Influence of National Culture on Organizational Culture.

Comparing Culture : Cultural and behavioral differences in different countries, various models for comparing cultural- Hofstede. GLOBE, Kluchohm & Stoodbeck

UNIT-II

Shift in Culture: Culture as a factor in a people's Response to Change, significance of shift in Culture ,Economic Factors and Shifts in National Culture ,Foreign Intervention and influence on shifts in Local Cultures.

Cross- Cultural Communication: Role of effective communication for international and cross- cultural management and in the field of international marketing, Cross - Cultural Verbal Non- Verbal communication across cultures, managing Culture -Specific Perception - Responding the Demographic Change.

UNIT- III

Cross Cultural Human Resources Management - Staffing and Training for Global Operations Global Staffing Choices - Expatriates or Local Managers? Dynamics of Cross-Cultural leadership, managing and motivating multi culture Teams.

Cross -cultural Negotiation & Decision making : Culture and Dispute, Resolution of Conflicts and Disputes in cross culture context, Negotiations across culture , Cross -culture Negotiation Process with two illustrations from multi cultural context { India-Europe / India -US setting, for instance }

UNIT- IV

Cross-culture ethics: Ethics values across cultures and Ethics dilemma, Overview of culture and management in Asia (India ,China and Japan), US and Europe.

References

1. *International management: Managing Across Borders And Cultural*, 4th Ed, "Deresky Helen," Pearson, ISBN: 81-2227-4 , Rs. 295.00
2. *The Secret Of A Winning Culture: Building High- Performance Teams*, "Esen Drlarry, Rchildress John," Prentice Hall India, ISBN: 81-203-1713-0, Rs. 195.00
3. *Revitalize Your Corporate Culture : Powerful Ways To Transform Your Company Into A Hiongh- Performance Organisation*, " Cashby Franklin", Prentice Hall India, ISBN: 81-203-1693-2, Rs 295
4. Monirtayeb , *International Human Resource Management* , Oxford

Journals

International Journal Of Cross Culture management, ISBN: 1470-5958, SAGE Publications

PUNJAB TECHNICAL UNIVERSITY
PROGRAMMING in C / C++ (MB-981)

Max. Marks : 100
External Assessment : 60
Internal Assessment : 40

Unit I

Problem solving with Computers: Algorithms and Flowcharts. Data types, constants, variables, operators, data input and output, assignment statements, conditional statements, Decision making ,branching ,looping. Arrays, strings processing, User defined functions : defining function, types of functions, function prototype, passing parameters, recursion, Pointers: Definition and uses of pointers, pointer arithmetic, pointers and array, pointers and functions, structures, union.

Unit II

Principles of OOP Evolution of OOP: OOP Paradigm, advantages of OOP, Comparison between functional programming and OOP Approach, characteristics of object oriented language : objects, classes, inheritance, reusability, user defined data types, polymorphism, overloading.

Unit III

Classes and objects: Classes, member functions, objects, arrays of class objects, pointers and classes, nested classes, constructors, destructors, inline member functions, static class member, friend functions, dynamic memory allocation. Inheritance, single inheritance, types of base classes, types of derivations, multiple inheritance containers, member access control.

Unit IV

Function overloading, operator overloading, polymorphism, early binding, virtual functions, late binding, pure virtual functions, Working with files : opening and closing of files, sequential input and output operations , error handling during file operations , command line arguments, random access file processing

References:

Sr.	Author	Books	Publisher
1	Lafore, Robert	C++	Galgotia Publishers
2	Balagurusamy, E	OOP with c++	Tata McGraw-Hill
3	Dietel & Dietel	C-How to Program	Pearson Education
4	Kenetkar	Let us C	BPB
5	Kanitkar	Understanding Pointers in C	BPB

PUNJAB TECHNICAL UNIVERSITY
RELATIONAL DATA BASE MANAGEMENT SYSTEM (MB-982)

Max Marks : 100
Internal Assessment: 40
External Assessment: 60

Unit-I

Overview of DBMS, Basic DBMS terminology, data independence. Architecture of DBMS, Distributed databases, structure of distributed databases, design of distributed databases,
Introduction to - data mining, data warehousing.

Unit II

Introduction to data models: entity relationship model, hierarchical model: from network to hierarchical, relational model, object oriented database, object relational database, comparison of OOD & ORD, comparison of network, hierarchical and relational models.

Unit III

Relational model: storage organizations for relations, relational algebra, relational calculus, functional dependencies, multivalued dependencies, and normalization.

Unit IV

Relational query language: SQL, database integrity, security, concurrency, recovery, client/ server architecture,
Introduction to SQL, DDL, DML, DCL Statements in SQL, Working with common database objects.

References:

Sr. Author	Title	Publisher
1. Desai	An Introduction to Database System	Galgotia
2. Ullman & Widom	First course in Database Systems	Pearson
3.	Data Introduction in Database System	
4.	Korth & Silbersollatz Database System Concept	
5.	Bayros Commercial Application Development using ORACLE Developer 2000	
6. C.J.	Data An Introduction to Database Systems	Narosa publishers
7. Ullman	Principles of Database Systems	Galgotia
8. D.Kroenke	Database Processing	Galgotia
9.	Henry F.korth, Abraham Database System Concepts	McGraw hill
10. NaveenPrakash	Introduction to Database Management	Tata McGraw Hill
11. Peter Rob & Carlos Coronal	Database system concepts	Cengage Learning

**PUNJAB TECHNICAL UNIVERSITY
SOFTWARE ENGINEERING (MB-983)**

**Max Marks: 100
Internal Assessment: 40
External Assessment: 60**

Unit I

Software: Characteristics, Components Applications, Software Process Model: Waterfall, Spiral, Prototyping, Fourth Generation Techniques, Concepts of Project Management, Role of Metrics And Measurement.

Unit II

S/W Project Planning: Objectives, Decomposition Techniques: S/W Sizing, Problem Based Estimation, Process Based Estimation, Cost Estimation Models: COCOMO Model, The S/W equation, System Analysis: Principles of Structured Analysis, Requirement Analysis, DFD, Entity Relationship Diagram, Data Dictionary.

Unit III

S/W Design: Objectives, Principles, Concepts, Design Mythologies: Data Design, Architecture Design, Procedural Design, Object - Oriented Concepts.

Unit IV

Testing Fundamentals: Objectives, Principles, Testability, Test Cases: White Box & black box Testing, Testing Strategies: Verification & Validation, Unit Test, Integration Testing, Validation Testing, System Testing.

Reference:

Sr.	Author	Title	Publisher
1.	Roger Pressman	Software Engineering" - A Practitioner's Approach	McGraw Hill
2.	R.E.fairley	Software Engineering Concepts	McGraw Hill
3.	Jalota	An Integrated Approach to Software Engineering	Narosa Publishing House
4.	Elias M.Award Professional	System Analysis and Design	McGraw-Hill

PUNJAB TECHNICAL UNIVERSITY
ADVANCED DECISION SUPPORT SYSTEMS (MB-984)

Max, Marks: 100

External Assessment: 60

Internal Assessment: 40

Unit 1

Decision-making: Concept, Process, Simon's model. Programmed versus nonprogrammed decisions, quantitative tools.

Decision models: Decision making under assumed certainty, risk & uncertainty.

Unit II

Introduction to DSS: Characteristics and Objectives: Comparison with EDP/MIS.

Levels of Decision Support System: Specific, Generator and tools - Forecasting packages,

Statistical packages; Relationship. Role of Decision Support Systems and its application.,.

Unit III

Components of Decision support Systems : Data Subsystem, Model Subsystem, and Userinterface DBMS, Quantitative models and modeling in DSS. Group Decision support Systems, Expert system and its integration with DSS. Executive Support System.

Unit IV

Create Applications Using EXCEL

Data Warehousing: Concepts, database structure, getting data into the data warehouse. Data Mining: Automated Analysis, constructing a data warehouse system.

REFERENCES:

1. Turban & Aronson : Decision Support System & Intelligent System
2. Micheal W. Davis : Applied Decision Support
3. R. Jaya Shanker : Decision Support Systems
4. Sprague and Watson : Decision Support Systems : Theory and Practice
5. J.L. Bennett : Building Decision Support Systems
6. Efrem G. Mallach : Decision Support & Data Warehouse System

PUNJAB TECHNICAL UNIVERSITY
E-Commerce & IT Enabled Services (MB 986)

Max. Marks: 100
External Assessment: 60
Internal Assessment: 40

Unit I

Internet Basics: What is internet? What Special about Internet?
Internet Protocols: TCP, IPv4, IPv6, FTP, HTTP, SOAP, SMTP, UDP.
WWW: The Client Site, Server Site, ECOM and Portals.

Unit II

Domain Name System: Name for Machine, Flat Name Space, Hierarchical Names, Internet Domain names, Domain Name Revolution.
E-Business models, BPO, Electronic Business system, E-Business security.

Unit III

An Introduction to Java Script: Statements, Comments, Variables, Operators, Functions, Loops, Objects.
HTML: Basic HTML and tags, Language description, usability, static creation of HTML web pages. Creating tables, forms and their advantages.
An overview of XML, Use of XML, integrity of XML with databases.

Unit IV

ASP.Net (Active Server Pages)
An Introduction to ASP.Net, variables and data types, Site Design: Creating Master Pages, Content Pages, Use of web.config file, global.asax file, Styling with themes, Events and code, Database connectivity through ADO.net, caching, Introduction of Web Services, Deployment, Builds and Finishing Up. An Introduction to AJAX.

References

1. Chris Hart, John Kauffman et al., Beginning ASP.NET 2.0, Wrox
2. Stephen Walther, ASP.NET Unleashed, Sams
3. Bharat Bhaskar, Electronics Commerce, Tata McGraw-Hill
4. Ivan Bayross, Web Enabled Commercial Application Development, BPB Publications
5. Introduction to .net by James Conard, Patrick Rengler, Birn Erancis, Jay Elynn Wron Publications

Introduction to Computer Networks (MB-985)

Max Marks: 100

Internal Assessment: 40

External Assessment: 60

Unit I

Overview: Introduction : Data communications, networks, topology, the internet, protocols and standards ; Network Models: The OSI model, TCP/IP protocol suite, addressing.

Unit II

Physical Layer, Media & Data link Layer: Data & signals: analog and digital, data rate limits, performance; Multiplexing: FDM, WDM, STDM, spread spectrum; Transmission media: guided media, unguided media; Switching: circuit switching , packet switching, structure of a switch
Error detection and correction: Introduction, nature of errors, parity check, CRC, hamming code; CSMA/CD, CSMA/CA, FDMA, TDMA, SDMA; connecting devices : passive hubs, active hubs, repeaters, bridges, switches, gateways; frame relay, backbone networks, V LAN, ATM, protocols at physical layer & data link layer

Unit III

Network Layer & Application Layer: IPv4 Addresses, IPv6 Addresses, IPv4 Addresses vs IPv6 Addresses internetworking, transition from IPv4 to IPv6, ICMP, IGMP, Protocols at network & application layer, routing & introduction to routing algorithms
Domain Name System : Name space, domain name space, DNS in the Internet, resolution, remote logging, E-mail, file transfer, www, http

Unit IV

Network Security: Introduction, cryptography, cryptography types, security services, digital signatures, key management, ip security, SSL/TLS, firewalls

Sr.	Author	Books	Publisher
1.	Behrouz A Forouzan	Data communications & networking	Tata McGraw-Hill
2.	A.S.Tannenbaum	Computer Network	Prentice Hall
3	D.E.Cormer	Computer Networks and Internet	Addison Wesley
3	D.E.Cormer & D.L Stevens	Inter networking with TCP-IP Design, Implementation	Prentice Hall
4	D.Bertsekas & R.Gallagar	Data networks	Prentice Hall

**PUNJAB TECHNICAL UNIVERSITY
VISUAL PROGRAMMING (MB-987)**

Unit I

Introduction to Visual Basic 2005: History of Visual Basic, Features of Visual Basic 2005, VB6.0 v/s VB 2005, Advantages of Visual Basic 2005.
Introduction to .Net, Origin and Structure of .NET
Introduction to Visual Basic 2005 IDE: Solutions and Projects, Using the code editor.

Unit II

Variables, Arrays and Collections, Constraints, Operators and Conditional Statements, Procedures and Functions. Constructing a User Interface using windows forms, interacting with forms, form controls, Dialog Boxes.

Unit III

MDI Applications and Menus, Types of Menus. Working with Databases using ADO.NET: Evolution of ADO.NET, Overview of ADO.NET, Working with ADO.NET objects.

Unit IV

Introduction to Object Oriented Programming, Creating a class library using Visual Basic 2005. Exception and error handling, debugging in Visual Basic 2005.

References

1. Ivan Bayross, Sharanam Shah : Visual Basic 2005 for Beginners
2. Deitel & Deitel Visual Basic .NET How to Program
3. Anne Prince: Murach's Beginning Visual Basic .NET
4. Wrox Press : Beginning VB.NET (2nd Edition)