MASTER OF COMMERCE (Computer Applications)

Revised Curriculum

w.e.f Academic Year 2024-2025



FACULTY OF COMMERCE & BUSINESS MANAGEMENT KAKATIYA UNIVERSITY Vidyaranyapuri, Warangal



PROGRAMME STRUCTURE

SEMESTER – I

Code	Title of the Paper		Credits	INT	ASS	EXT	Total
101	Management and Organizational Behaviour		5	20	10	70	100
102	Corporate Financial Accounting		5	20	10	70	100
103	Quantitative Techniques		5	20	10	70	100
104	Principles of Information Technology	3 5 20 10		10	50	80	
104P	Principles of Information Technology - LAB	4=2	4=2			20	20
105	Programming with C & C++	3 5		20	10	50	80
105P	Programming with C & C++- LAB	4=2	4=2			20	20
106	Seminars	2 1		-	-	50	50
	Total	27	26	100	50	400	550

INT: Internal Examination ASS: Assignment EXT: External Examination

SEMESTER – II

Code	Title of the Paper	ppw	Credits	INT	ASS	EXT	Total
201	Financial Management	5	5	20	10	70	100
202	Human Resource Management	5	5	20	10	70	100
203	Marketing Management		5	20	10	70	100
204	Business Analytics	3	5	20	10	50	80
204P	Business Analytics - LAB	4=2				20	20
205	Computerized Accounting	3	5	20	10	50	80
205P	Computerized Accounting - LAB	4=2				20	20
206	Seminars	2	1	-	-		50
	Total	27	26	100	50	400	550

INT: Internal Examination ASS: Assignment EXT: External Examination



Code	Title of the Paper	ppw	Credits	INT	ASS	EXT	Total
301	Strategic Management and Policy	5	5	20	10	70	100
302	IT in Banking and Insurance	5	5	20	10	70	100
303	Digital Marketing	3	5	20	10	50	80
	Digital Marketing - LAB	4=2				20	20
304	Data Analytics	3	5	20	10	50	80
	Data Analytics - LAB	4=2				20	20
305	Web Programming	3	5	20	10	50	80
	Web Programming - LAB	4=2				20	20
306	Seminars	2	1	-	-	50	50
	Total	27	26	100	50	400	550

SEMESTER – III

SEMESTER - IV

Code	Title of the Paper	ppw	Credits	INT	ASS	EXT	Total
401	Business Research Methods	5	5	20	10	70	100
402	International Business	5	5	20	10	70	100
403	Management Information System	5	5	20	10	70	100
404	Database Management Systems	3	5	20	10	50	80
404P	Database Management Systems – LAB	4=2	-	-	-	20	20
405	Software Engineering	3	5	20	10	50	80
405P	Software Engineering - LAB	4=2	-	-	-	20	20
406	Seminars	2	1	-	-	50	50
407	Comprehensive Software Project (Evaluation and Viva-Voce)	-	2	-	-	100	100
	Total	27	28	100	50	500	650

INT: Internal Examination **ASS:** Assignment **EXT:** External Examination



SCHEME OF EVALUATION

The scheme of evaluation for M.Com (C.A) (I, II, III & IV Semesters) is as under:

1. The performance of the students will be evaluated for 100 marks which consist of 30 marks for internal assessment & 70 marks for semester-end examination.

2. The question paper pattern for internal assessment is for 30 marks divided into two parts which consists of:

a) **Section – A (10 Marks):** 5 Short questions each carries 2 marks (Answer in one paragraph)

b) Section – B (2½ Marks): Multiple Choice Questions, each carries ½ mark

c) **Section – C (2¹/₂ Marks)**: Match the Following with 5 questions, each carries ¹/₂ mark

d) **Section – D (2¹/₂ Marks)**: Assertion and Reason with 5 questions, each carries ¹/₂ mark

e) **Section – E (2¹/₂ Marks):** Syllogism with 5 questions, each carries ¹/₂ mark

Note: The duration of internal assessment for 20 marks is 90 minutes.

Assignments: 10 marks for Theory Assignments given by the concerned teacher. *Note: Assignment need to be retained with the department at the college level.*

3. The question paper pattern for end-semester examination is for 70 marks divided into Part 'A' & 'B' which consists of:

Part – A – 20 Marks (5 short answer questions each carries 4 marks) without choice **Part – B – 50 Marks** (5 long answer questions each carries 10 marks) with internal choice Note: The duration of end-semester examination for 70 marks is three (3) hours.

4. The question paper pattern for practical papers will be evaluated for 100 which consist of 50 marks semester-end examination, 20 marks for internal assessment, 10 marks for Assignment and 20 marks for lab practical examination.

The question paper pattern for internal assessment for 20 marks is divided into two parts which consists of 5 short questions each carries 2 marks and 2 long questions each carries 5 marks.



MODEL QUESTION PAPER FOR EXTERNAL EXAMINATION

Maximum Marks: 70

PART –A (20 Marks) Answer the following Questions. Each Question Carries 02 Marks (05 Questions x 4 Marks = 20 Marks)

I.

- a. Question 1 from Unit I
- b. Question 1 from Unit II
- c. Question 1 from Unit III
- d. Question 1 from Unit IV
- e. Question 1 from Unit V

	PART – B (50 Marks) Answer all the Questions. Each Question carries 10 Marks
2. A. Unit – I	(0r)
B. Unit - I	(01)
3. A. Unit – II	$(\mathbf{0r})$
B. Unit - II	
4. A. Unit – III	(0r)
B. Unit - III	
5. A. Unit – IV	(0r)
B. Unit - IV	
6. A. Unit – V	(0r)
B. Unit – V	



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MODEL QUESTION PAPER FOR EXTERNAL EXAMINATION

Maximum Marks: 50

PART -A (15 Marks) Answer the following Questions. Each Question Carries 03 Marks (05 Questions x 3 Marks = 15 Marks)

I.

a. Question – 1 from Unit – I

b. Question – 1 from Unit – II

c. Question – 1 from Unit – III

d. Question – 1 from Unit – IV

e. Question – 1 from Unit – V

	PART – B (35 Marks) Answer all the Questions. Each Question carries 07 Marks
2. A. Unit – I	
B. Unit - I	(Or)
3. A. Unit – II	(0r)
B. Unit - II	(01)
4. A. Unit – III	(0r)
B. Unit - III	
5. A. Unit – IV	(0r)
B. Unit - IV	
6. A. Unit – V	(0r)
B. Unit – V	

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MODEL QUESTION PAPER FOR INTERNAL EXAMINATIONS

Time: 90 Mins

Maximum Marks: 20

Part - A (10 Marks)

ANSWER THE FOLLOWING QUESTIONS. EACH QUESTION CARRIES 02 MARKS (05 Questions x 02 marks = 10 Marks)

- 1. Question from Unit I
- 2. Question from Unit I
- 3. Question from Unit II
- 4. Question from Unit II
- 5. Question from Unit III

Part - B (2 ½ Marks)

MULTIPLE CHOICE QUESTIONS - EACH QUESTION CARRIES 1/2 MARK

- 1. Question from Unit I
- 2. Question from Unit I
- 3. Question from Unit II
- 4. Question from Unit II
- 5. Question from Unit III

Part - C (2 ¹/₂ Marks)

MATCH THE FOLLOWING - EACH QUESTION CARRIES 1/2 MARK

- 1. Question from Unit I
- 2. Question from Unit I
- 3. Question from Unit II
- 4. Question from Unit II
- 5. Question from Unit III

Part - D (2 ½ Marks)

ASSERTION & REASON - EACH QUESTION CARRIES 1/2 MARK

- 1. Question from Unit I
- 2. Question from Unit I
- 3. Question from Unit II
- 4. Question from Unit II
- 5. Question from Unit III

Part – E (2 ½ Marks) SYLLOGISM - EACH QUESTION CARRIES ½ MARK

- 1. Question from Unit I
- 2. Question from Unit I
- 3. Question from Unit II
- 4. Question from Unit II
- 5. Question from Unit III

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101 - MANAGEMENT AND ORGANIZATIONAL BEHAVIOUR

Course Objective:

This syllabus is designed to provide a comprehensive understanding of individual and group behavior within organizations, along with the theoretical frameworks that explain these dynamics.

Specific Objectives:

- **Develop a comprehensive understanding** of the fundamental concepts, theories, and principles of management and organizational behavior.
- **Equip students with the necessary skills** to effectively manage individuals, teams, and organizations in diverse and dynamic environments.
- Foster critical thinking and problem-solving abilities to address complex organizational challenges.
- **Promote ethical decision-making** in managerial roles.
- **Provide a foundation for further study** in specialized management fields.

UNIT - I: INTRODUCTION TO MANAGEMENT

Management: Definitions, Characteristics, nature, scope and significance - Management: As an Art, Science and Profession – Concept of efficiency and effectiveness – Managerial levels, skills, functions and roles – Development of Management thought - Principles of Scientific Management - Fayol's 14 Principles of Management - Systems Approach.

UNIT - II: PLANNING AND DECISION MAKING:

Planning: Definition, characteristics, principles, importance, process, types and levels, limitations; Types of Plans – Essentials of a good plan – Components of Planning: Objectives, policies, procedures, rules, strategies - **Management by Objectives (MBO)** – Definition, features, process, principles, importance and limitations – Making MBO effective - **Decision Making**: Definition, features, nature, importance, process; Types of Decisions - Decision Making Models - Group Decision Making Techniques – Delegation of Authority and Decentralization.

UNIT - III: INTRODUCTION TO ORGANIZATIONAL BEHAVIOUR:

Organisation: Definitions, Characteristics, types, structure, principles and process -Elements of Organisation Structure - Types of Organisational Designs – Authority and Power – Delegation and Decentralisation - Span of Management – Line and Staff.

Organisational Behaviour: Definition, features, nature, significance, determinants.

Individual Behaviour in Organisations: Personality: Definitions, Characteristics, Determinants, Personality Traits - Models of Human Personality - Perception: Definitions, Process, Factors influencing, Distortions - Attitudes: Definitions and Formation of Attitudes

Learning: Definitions, Process, Learning Theories.



UNIT IV: GROUP BEHAVIOUR IN ORGANISATIONS:

Groups: Meaning – Formation - Group Development -Types of Groups - Group Dynamics: Definitions Group Behaviour: Group Cohesiveness, Norming, Thinking, Risk Shift, Social Loafing - **Team Development**: Meaning, Definitions, Groups vs. Teams, Team Development, Using Teams for Organisational Building - **Conflicts**: Definitions, Process, Drives for Conflicts, Types, Outcomes, Conflict Resolution Techniques.

UNIT V: ORGANISATIONAL COMMUNICATION AND LEADERSHIP

Communication- Meaning - Process – Barriers – Overcoming Barriers. **Leadership**: Meaning – Styles – Managerial Grid – Traits Vs. Situational – Transformational Leadership – Leadership for Millennium Organisations. **Motivation**: Meaning – Motivators – Maslow and Herzberg Theories of Motivation – Approaches to Motivating Employees. **Stress**: Meaning – Individual - Organisational dimensions of Stress- Stress Management Techniques: Individual and Organisational - **Organisational Change**: Meaning – Need - Types – Resistance to Change and Overcoming Resistance.

Suggested Readings:

- 1. Weihrich Heinz, Cannice V Mark and Koontz Harold, 2008, Management: A Global and Entrepreneurial Perspective, Tata McGraw Hill Publishing Company Limited, New Delhi.
- 2. Robbins P Stephen and DecenzoA David, 2006, Fundamental of management: Essential Concepts and Applications, Pearson Education, New Delhi, p.53.
- 3. L.M. Prasad, 2020, Principles and Practice of Management, Sulthan Chand & Sons, New Delhi.
- 4. Greenberg Jerald and Baron A Robert (2009), Behaviour in Organisations, 9th Edition, New Delhi, Prentice Hall of India Learning Private Limited.
- 5. Sarma V S Veluri (2009), Organisational Behaviour An Interactive Learning Approach (Text and Cases), Mumbai, Jaico Publishing House.



Learning Outcomes:

At the end of the Course, Student should be aware about the following: **Unit I: Introduction**

- **Define** management, its characteristics, nature, scope, and significance.
- **Differentiate** between management as an art, science, and profession.
- **Explain** the concepts of efficiency and effectiveness.
- **Identify** different managerial levels, skills, functions, and roles.
- **Trace** the evolution of management thought through various schools.
- Analyze the issues and challenges of global and comparative management.

Unit II: Planning and Decision Making

- **Define** planning, its characteristics, principles, importance, and process.
- Classify different types of plans and levels of planning.
- Explain the essentials of a good plan and its components
- **Describe** Management by Objectives, features, process, principles, importance, and limitations.
- **Define** decision-making, its features, nature, importance, and process.
- **Classify** different types of decisions.
- **Explain** classical, administrative, and political decision-making models.
- **Apply** group decision-making techniques.

Unit III: Organizing and Staffing

- **Define** organization, its characteristics, types, need, significance and principles.
- **Outline** the steps in organizing and objectives of organizing.
- **Explain** different forms of organizational structure and design.
- Analyze organizational structures in international organizations.
- **Describe** departmentation and its bases.
- **Explain** the concepts of authority, responsibility, delegation, centralization, and decentralization.
- **Define** staffing, its characteristics, need, importance, and process.

Unit IV: Direction and Coordination

- **Define** direction, its features, nature, elements, scope, and techniques.
- **Differentiate** between direction and supervision.
- **Explain** span of supervision, determining factors, types, and limitations.
- **Define** motivation, its features, nature, and theories.
- **Discuss** financial and non-financial methods of motivation.
- **Define** leadership, its features, importance, functions, and qualities of a good leader.
- **Explain** leadership traits, styles, and the managerial grid.



- **Discuss** leadership in international organizations.
- **Define** communication, its significance, process, types, and barriers.
- **Discuss** communication in international organizations.
- **Define** coordination, its features, elements, objectives, need, factors affecting, principles, and techniques.
- **Differentiate** between coordination and cooperation.

Unit V: Controlling, Budgeting, and Reporting

- **Define** controlling, its features, types, process, and problems.
- **Explain** the requisites of a good control system.
- **Define** budgeting, its objectives, functions, types, and factors affecting budgeting.
- **Define** reporting, its objectives, need, types, modes, and principles.



102 - CORPORATE FINANCIAL ACCOUNTING

Course Objective:

To equip students with advanced knowledge and practical skills in the preparation, analysis, and interpretation of financial statements for complex corporate entities. This will enable them to critically evaluate financial performance, make informed financial decisions, and contribute effectively to financial reporting and corporate governance practices.

Specific Objectives:

- **Develop a comprehensive understanding** of the fundamental principles and practices of corporate accounting.
- **Equip students with the necessary skills** to prepare and analyze financial statements for various types of corporations.
- Foster critical thinking and problem-solving abilities to address complex accounting challenges.
- Promote ethical decision-making in financial reporting.
- **Provide a foundation for further study** in specialized accounting fields.

UNIT – I: FINAL ACCOUNTS

Issue of Shares: ESOPs - ESPS - Sweat Equity Shares - Book Building- Buy-back of Shares -Conversion of debentures into shares- Preparation of Final accounts – Schedule VI Part I and Part II – Profit prior to incorporation – Managerial remuneration – Issue of Bonus shares – Preparation of Balance Sheet.

UNIT - II: AMALGAMATION

Amalgamation as Merger- Amalgamation as Purchase -Calculation of Purchase Consideration under various methods - Accounting treatment as per AS 14 in the books of Transferee Company. Absorption (Excluding inter – company holdings) – External reconstruction – Internal reconstruction (Excluding scheme of reconstruction).

UNIT – III: LIQUIDATION

Liquidation of companies: Meaning-causes-Preparation of Statement of Affairs and Liquidator's final statement. Holding company accounts excluding inter-company holdings: Preparation of Consolidated Balance sheet only.



UNIT – IV: ACCOUNTS OF BANKING COMPANIES AND INSURANCE COMPANIES

Accounts of Banking Companies - Legal Provisions - Capital Adequacy Norms - Rebate on Bills Discounted - Asset Classification and Provisioning - Preparation of Final accounts. Insurance Company Accounts - Nature of Insurance Business - Distinction between Life and Non Life Insurance - Accounts of Life Insurance Business - Accounts of General Insurance Business - IRDA Regulations Regarding Preparation of Financial Statements.

UNIT - V: CONTEMPORARY ACCOUNTING METHODS

Accounting for price level changes – Social responsibility accounting – Human resource accounting - Environmental Accounting - Forensic Accounting.

Suggested Readings:

- 1. M.Y.Khan, Indian Financial System, Tata McGraw Hill, 2001.
- 2. Jain S. P., Narang K. L., Simmi Agrawal and Monika Sehgal (2019), "Advanced Accountancy Corporate Accounting Volume II", Kalyani Publishers, New Delhi.
- Maheshwari S. N., Sharad K. Maheshwari & Suneel K. Maheshwari, (2022), "Advanced Accountancy - Volume I &II", Vikas Publishing House Pvt. Ltd., New Delhi.
- 4. B.S. Bhatia &G.S.Bhatre, Management of Capital Markets, Financial Services and Institutions, Deep and Deep Publishers, 2000.
- 5. Arulanandam, M.A. and Raman, K.S. "Advanced Accounting", Volume II, New Delhi, Himalaya Publishing House, 2016.
- 6. Gupta, R.L. and Radhasamy, M., "Advanced Accountancy", Volume II, New Delhi, Sultan Chand and Sons, 2015.
- 7. Iyengar, S.P, "Advanced Accountancy" Volume II, New Delhi, Sultan Chand and Sons, 2015.
- 8. Reddy T. S. &Murthy A., (2022), "Corporate Accounting Volume I &II", Margham Publications, Chennai.

Learning Outcomes:

At the end of the Course, Student should be aware about the following:

UNIT I: Final Accounts

- **Understand** the concept of shares and their different types (ESOPs, ESPS, Sweat Equity Shares).
- **Explain** the process of book building and buy-back of shares.
- **Prepare** final accounts of a company, adhering to Schedule VI Part I and Part II requirements.



• **Account** for profit prior to incorporation, managerial remuneration, and bonus shares.

UNIT II: Amalgamation

- **Differentiate** between amalgamation as merger and amalgamation as purchase.
- **Calculate** purchase consideration under various methods.
- **Apply** AS 14 accounting treatment in the books of the transferee company.
- Account for absorption, external reconstruction, and internal reconstruction.

UNIT III: Liquidation

- **Define** the concept of liquidation and its causes.
- **Prepare** the Statement of Affairs and Liquidator's final statement.
- **Prepare** consolidated balance sheets of holding companies (excluding intercompany holdings).

UNIT IV: Accounts of Banking Companies and Insurance Companies

- **Understand** the legal provisions and Capital Adequacy Norms for banking companies.
- Calculate rebate on bills discounted and asset classification and provisioning.
- **Prepare** final accounts of banking companies.
- **Distinguish** between life and non-life insurance.
- **Prepare** accounts for life and general insurance businesses.
- **Comprehend** IRDA regulations for financial statement preparation.

UNIT V: Contemporary Accounting Methods

- **Explain** the concept of accounting for price level changes.
- **Understand** the principles of social responsibility accounting, human resource accounting, and environmental accounting.
- Know the basics of forensic accounting.



103 – QUANTITATIVE TECHNIQUES

Course Objective:

To equip students with a strong foundation in statistical methods and their application in managerial decision-making.

Specific Objectives:

After studying this course, students will be able to:

- **Apply** statistical methods to analyze business data.
- Use statistical software to conduct data analysis.
- Make informed decisions based on statistical evidence.
- **Understand** the concepts of probability, hypothesis testing, and correlation analysis.

UNIT - I: INTRODUCTION

Statistics: Meaning - Salient Features - Statistical Techniques - Role of Statistical Techniques in Management Decision Making – Measures of Central Tendency - Measures of Dispersion - Measures of Skewness - Correlation and Regression of two variables.

UNIT - II: PROBABILITY AND PROBABILITY DISTRIBUTIONS

Probability: Basic Concepts of Probability - Additive and Multiplicative Laws - Conditional Probability and Baye's Decision Rule. (Problems)

Probability Distributions: Salient Features of Probability Distributions - Binomial, Poisson and Normal Distribution- Business Applications of Probability Distributions. (Problems)

UNIT - III: SAMPLING THEORY, TESTS OF SIGNIFICANCE AND ANOVA

Sampling: Concept of Sample, sampling and Sampling Distribution - Reasons for Sampling -Concept of Standard Error - Estimation and Hypothesis testing: Point Estimation -Interval Estimation- Properties of Good Estimator - Procedure for Hypothesis Testing -Type I and Type II Errors - Rules for Acceptance /Rejection of Hypothesis (Theory) - Large Sample Tests: Mean Test- Difference between Two Means - Difference between Two Standard Distributions. (Problems) - Small Sample Tests: Mean Test - Difference between Means of Two Independent Samples - Difference between Two Dependent Samples. (Problems)

Analysis of Variance: F-test: Meaning and Applications - ANOVA: Assumptions - Procedure - One way and two-way analysis of variance



UNIT- IV: NON-PARAMETRIC TESTS

Non-Parametric Tests: Meaning, Advantages and Limitations - **The Sign Tests**: One Sample Sign Test- The Two Sample Sign Test for Paired and Independent Observations -**The Runs Tests**: One Sample Runs Test -Test of Randomness using Runs above and below the Median - **Rank Sum Tests**: The Man-Whitney U Test- The Kruskal Wallis Test - The Wilcoxon Signed Rank Test - **Chi-Square Test**: Definition - Conditions for applying Chi square test, Yates"s correction – Uses and limitations of Chi square test – Chi square test for testing the independence of Attribute - Goodness of Fit. (Problems)

UNIT - V: STATISTICAL DECISION THEORY, GAME THEORY AND LINEAR PROGRAMMING

Statistical Decision Theory: Nature of Decision - State of Nature – Pay off Tables -Expected Pay off - Expected Opportunity Loss – Value of Perfect Information – Types of Decision Situation – Choice of Decision Criteria – Decision Tree Analysis – Decision Making under Uncertainty (Problems)

Game Theory: Characteristics of Game Theory – Two Persons Zero Sum Game - Maximum and Minimax Strategies – Saddle Point – Dominating Strategy – Mixed Strategy - Limitations of Game Theory (Problems with Analytical Formulae and Graphical Methods).

Linear Programming: Meaning - Requirements for application - Assumptions - Advantages - Application of LP - Formulation of LP problems (Problems) - Graphical Solutions of LP problems with two variables only (Problems)

SUGGESTED READINGS:

- 1. GC Beri Business Statistics, TMH
- 2. Amir D. Aczel & Jayavel Sounder Pandian- Complete Statistics, TMH.
- 3. Anderson R, David Sweeney J, Dennis & Williams A Thomas Statistics for Business and Economics, Thomson.
- 4. ND Vohra Management Decisions, New Age Publications.
- 5. SP Gupta & MP Gupta- Business Statistics, Sultan Chand & Sons.
- 6. Levin R.L. Rubin S.David Statistics for Management, Pearson/PHI.
- 7. D.C.Sancheti & VK.Kapoor: Statistics, Sultan Chand & Sons
- 8. Anand Sharma: Quantitative Techniques for Decision Making Himalaya Publications
- 9. Shenoy GV: Quantitative Techniques for Managerial Decisions, New Age



Learning Outcomes:

At the end of the Course, Student should be aware about the following:

UNIT I: Introduction

- **Understand** the basic concepts of statistics and its role in management decisionmaking.
- **Calculate** measures of central tendency, dispersion, skewness, correlation, and regression.

UNIT II: Probability and Probability Distributions

- **Apply** basic probability concepts, including additive and multiplicative laws, conditional probability, and Bayes' Decision Rule.
- **Identify** and use common probability distributions (binomial, Poisson, and normal) in business contexts.

UNIT III: Sampling Theory, Tests of Significance, and ANOVA

- **Explain** the concepts of sampling, sampling distribution, and standard error.
- **Conduct** point and interval estimation.
- **Perform** hypothesis testing for large and small samples (mean tests, difference between means).
- Analyze data using ANOVA (F-test) to compare group means.

UNIT IV: Non-Parametric Tests

- **Understand** the advantages and limitations of non-parametric tests.
- **Apply** the sign test, runs test, rank sum tests (Mann-Whitney U, Kruskal-Wallis, Wilcoxon signed rank), and chi-square test for various statistical analyses.

UNIT V: Statistical Decision Theory, Game Theory, and Linear Programming

- **Utilize** statistical decision theory concepts (decision trees, expected payoff, expected opportunity loss) for decision-making.
- **Analyze** game theory concepts (two-person zero-sum games, maximum and minimax strategies, saddle point, dominating strategy, mixed strategy).
- Formulate and solve linear programming problems using graphical methods.



104 – PRINCIPLES OF INFORMATION TECHNOLOGY

Course Objective:

To equip students with a comprehensive understanding of information technology (IT) concepts, tools, and applications to enable effective decision-making and management in today's digital business environment.

Specific Objectives:

After studying this course, students will be able to:

- **Understand** the role of information technology in business.
- Use technology to improve business processes and decision-making.
- **Develop** information systems to support business operations.
- Analyze the impact of technology on business strategy and competitive advantage.

UNIT - I: INFORMATION TECHNOLOGY

Definition - Development and Trends - Managerial Issues in IT Planning - Information Technology Economics - Cost-Benefit Analysis of IT - Role of Computers in Management -Decision Making Process - Programmed and Non-Programmed Decisions – MIS - Concept and applications - Decision Support System (DSS) – Transaction Processing System (TPS).

UNIT - II: INTERNET AND COMPUTER NETWORKS

Computer Networks: Network Topology - Security in Data Communication - Encryption and Decryption – Internet, Intranet, Extranet, and World Wide Web – Browsers and Search Engines.

Disrupting Technologies: Blockchain,5G Technology, Advanced Virtual Reality, Artificial Intelligence and Machine Learning (AI & ML), Cloud Services, Nanotechnology, Big Data, 3D printing, Cyber Security, Cloud Computing, Quantum Computing, Hyper-Personalization, Chatbots and Smart assistants, Smart Cities, Fingerprints, Internet of Things (IoT) (Concepts only)

UNIT – III: E-BUSINESS

E-Business: Definition, Evolution, Key technologies, Business models, infrastructure, Benefits and challenges. E-Business Strategies and Implementation: E-business strategy development, E-commerce website design and development, Online marketing and promotion, Payment systems and security, Supply chain management in e-business, Customer relationship management (CRM), E-Business analytics.

UNIT - IV: WORKING WITH OFFICE PRODUCTIVITY SOFTWARE-I

MS-Office - MS Word: Creation of Document - Formatting Document - Text editing and saving - Organising information with tables and outlines - Mail Merge - Spread Sheet



Applications - MS Excel - Creation and Applications of Spread Sheets - Creating and editing worksheets – Cell formatting – Creating and using formulas and functions – Use of Macros – working with graphs and charts – Data Analysis with Statistical Tools - Use of Financial Tools - Use of other functions in Excel for data analysis.

UNIT - V: WORKING WITH OFFICE PRODUCTIVITY SOFTWARE-II

Presentation Graphics through MS Power Point - Creation of slides - Use of templates and slide designs for creating power point slides - use of drawings and graphics - Organising presentation through Multimedia Files and Slides - Developing a Professional presentation on Business Plans, Institutions, Products, People, etc.

Database Models - Creating and Managing Databases – Data Definition Language (DDL) – Data Manipulation Language (DML) – Data Models – Entity-Relationship Models – Network Model – Relational and Object Oriented Data Models - Data Warehousing: Concept, Architecture, Applications - Data Mining: Concepts and Applications.

Data Management through MS-Access - Create Databases - Normalization: 1NF, 2NF, 3NF, BCNF – Tables - Relationships – Primary and Secondary Key - Create forms to enter data-filter data-use of queries in data manipulation – Creation of forms and Generating reports – Concept of RDBMS

Suggested readings:

- 1. Turban, McLean, Wetherbe Information Technology for Management, 4th Edition, Wiley India, 2007.
- 2. Peter Norton- Introduction to Computers-Sixth Edition, 2007, Tata McGraw Hill.
- 3. Brian K. Williams, Stacey C. Sawyer-Using Information Technology-A Practical Introduction to Computers and Communications-6th Edition-Tata McGraw Hill, 2007.
- 5. V.Rajaraman-Introduction to Information Technology, Prentice Hall India, 2008.
- 6. Winston-Microsoft Office Excel 2007 Data Analysis and Business Modeling, First Ediction, Prentice Hall India, 2007.
- 7. Lambet, Lambert III & Prepernau, Microsoft Office Access 2007 Step-by-Step, First Edition, Prentice Hall India, 2007.
- 8. David Whigam-Business Data Analysis Using Excel, First Edition, Oxford University Press, 2007



Learning Outcomes:

At the end of the Course, Student should be aware about the following: UNIT I: Information Technology

- **Define** information technology and understand its development and trends.
- Analyze managerial issues related to IT planning and economics.
- **Conduct** cost-benefit analysis of IT investments.
- **Explain** the role of computers in management decision-making processes.
- Differentiate between programmed and non-programmed decisions.
- **Understand** the concepts and applications of MIS, DSS, and TPS.

UNIT II: Internet and Computer Networks

- **Identify** different network topologies and security measures in data communication.
- **Explain** encryption and decryption techniques.
- **Understand** the concepts of the Internet, Intranet, Extranet, and World Wide Web.
- Utilize browsers and search engines effectively.
- **Gain knowledge** of disruptive technologies like blockchain, 5G, VR, AI & ML, cloud services, nanotechnology, big data, 3D printing, cybersecurity, cloud computing, quantum computing, hyper-personalization, chatbots, smart cities, IoT, and more (conceptual understanding).

UNIT III: E-Business

- **Define** e-business and understand its evolution, key technologies, business models, infrastructure, benefits, and challenges.
- **Develop** e-business strategies and implement them effectively.
- **Design** and develop e-commerce websites.
- **Utilize** online marketing and promotion techniques.
- Implement payment systems and security measures.
- Manage supply chain in e-business.
- Apply customer relationship management (CRM) strategies.
- **Conduct** e-business analytics.

UNIT IV: Working with Office Productivity Software I

- **Create** and format documents using MS Word.
- **Organize** information using tables and outlines.
- **Perform** mail merge operations.
- **Create** and apply spreadsheets in MS Excel.
- Format cells and create formulas and functions.



- **Use** macros, graphs, charts, and statistical tools for data analysis.
- **Apply** financial tools and other functions in Excel.

UNIT V: Working with Office Productivity Software II

- **Create** presentations using MS PowerPoint.
- Utilize templates and slide designs.
- **Incorporate** drawings, graphics, multimedia files, and slides.
- **Develop** professional presentations on various topics.
- Create and manage databases using MS Access.
- **Understand** data definition language (DDL) and data manipulation language (DML).
- Apply data models (entity-relationship, network, relational, object-oriented).
- **Implement** data warehousing and data mining concepts.
- Normalize databases (1NF, 2NF, 3NF, BCNF).
- **Create** forms, enter data, filter data, use queries, and generate reports.
- **Understand** the concept of RDBMS.



104P – PRINCIPLES OF INFORMATION TECHNOLOGY – PRACTICAL <u>-- Lab Manual --</u>

<u>MS-Word</u>

6. Create a news-paper document with at least 200 words,

- a. Use margins as, top:1.5, bottom:2, left:2, right:1 inches.
- b. Use heading "Gandhi Jayanti", font size: 16, font color: red, font face: Arial Black.
- c. With first letter "dropped" (use drop cap option) of the first paragraph containing a picture at the right side
- d. Use three columns from the second paragraph onwards till the half of thepage.
- e. Then use heading "Computer basics"
- f. Create paragraph using two columns till the end of the page.
- 7. Create a Mathematical question paper using, at least five equations
 - a. With fractions, exponents, summation function
 - b. With at least one m^*n matrix
 - c. Basic mathematical and geometric operators.
 - d. Use proper text formatting, page color and page border.
 - 8. Create a flowchart using,
 - a. Proper shapes like ellipse, arrows, rectangle, and parallelogram.
 - b. Use grouping to group all the parts of the flowchart into one single object.

9. Create a table using table menu with,

- a. At least 5 columns and 10 rows.
- b. Merge the first row into one cell.
- c. Merge the second row into one cell, then split the second row into threecells.
- d. Use proper table border and color.
- e. Insert proper content into the table with proper text formatting.

10. Create a table using two columns,

- a. The left column contains all the short-cut keys and right side column contains the function of the short-cut keys.
- b. Insert a left column using layout option. Name the heading as Serial No.

11. Create two letters with the following conditions in Ms Word and find the difference.

- a. Write a personal letter to your friend using at least 100 words and two paragraphs. The date must be in top-right corner. Use "justify" text- alignment and 1.5 line spacing for the body of the letter. Letter must contain proper salutation and closing.
- b. Use step by step mail-merge wizard to design a letter. (Mailing → step bystep mail merge wizard → letters → start from a template → select template → letters → select proper template → create new document → OK)



12. Create a letter, which must be sent to multiple recipients.

- a. Use Mail-Merge to create the recipient list.
- b. Use excel sheet to enter the recipient.
- c. Start the mail merge using letter and directory format. State the difference.

13. Create a Macro Program with your own data and run it.

MS-Excel

- 1. Create a table "Student result" with following conditions.
 - a. The heading must contain, Sl. No., Name, Mark1, Mark2, Mark3, Total, average and result with manual entry.
 - b. Use formulas for total and average.
 - c. Find the name of the students who has secured the highest and lowestmarks.
 - d. Round the average to the nearest highest integer and lowest integer (use ceiling and floor function respectively).

2. Do as directed

a. Create a notepad file as per the following fields

- Slno name th1 th2 th3 th4 th5 total % grade
- b. Import this notepad file into excel sheet.
- c. Grade is calculated as,
 - i. If %>=90, then grade A
 - ii. If %>=80 and <90, then grade B
 - iii. If %>=70 and <80, then grade C
 - iv. If %>=60 and <70, then grade D
 - v. If %<60, then grade F

3. Create a sales table using the following data,

Item	Year1	Year2	Year3	Year4
Item1	1000	1050	1100	1200
Item2	950	1050	1150	1200
Item3	1100	1200	1200	1300

- a. Draw the bar-graph to compare the sales of the three items for four yearsusing insert option.
- b. Draw a line-graph to compare the sales of three items for four years using insert option.
- c. Draw different pie-charts for the given data using insert option.
- d. Use condition, to highlight all the cells having value >=1000 with redcolor (use conditional formatting).



MS-PowerPoint

- 1. Create a power-point presentation with minimum 5 slides.
 - a. The first slide must contain the topic of the presentation and name of the presentation.
 - b. Must contain at least one table.
 - c. Must contain at least 5 bullets, 5 numbers.
 - d. The heading must be, font size:32, font-face: Arial Rounded MT Bold, font-color: blue.
 - e. The body must be, font size: 24, font-face: Comic Sans MS, font-color:green.
 - f. Last slide must contain "thank you".

2. Create a power-point presentation with minimum 10 slides

- a. Use word art to write the heading for each slides.
- b. Insert at least one clip-art, one picture
- c. Insert at least one audio and one video
- d. Hide at least two slides

3. Create a power-point presentation with minimum 5 slides

- a. Use custom animation option to animate the text; the text must move left to right one line at a time.
- b. Use proper transition for the slides.
- 4. Create 5 Slides on "Polio immunization" and execute the following by using Action Buttons for all the slides to link them a. Link first slide with the third b. Link second slide with fifth c. Link third slide with fourth.
- 5. Create 3 Slides on "Plant tress and protect Nature" and each slide should have a Comment.
- 6. Create two files on "Clean & Green" and "No Smoking" in MS PowerPoint and hyperlink them with each other.

MS-Access

- 1. Create a database "Student" with,
 - a. At least one table named "mark sheet" with field name "student name, roll number, mark1, mark2, mark3, mark4, total"
 - b. The data types are, student name: text, roll number: number, mark1 tomark4: number, total: number. Roll number must be the primary key.
 - c. Enter data in the table. The total must be calculated using update query.
 - d. Use query for sorting the table according to the descending/ascendingorder of the total marks.

2. With addition to the table above,

a. Add an additional field "result" to the "mark sheet" table.



- b. Enter data for at least 10 students
- c. Calculate the result for all the students using update queries, iftotal>=200, then pass, else fail.
- d. Search the students, whose name starts with "sh".
- e. Show the names and total marks of the students who have passed the examination.



105 - PROGRAMMING WITH C AND C++

Course Objective:

To empower students with the ability to develop efficient and well-structured computer applications using C and C++ programming languages. This will equip them to analyze, design, and implement solutions for real-world business problems, fostering strong problem-solving and analytical skills with a programming foundation.

Specific Objectives:

- 1. **Equip students** with a strong foundation in C and C++ programming languages.
- 2. **Develop their skills** in problem-solving, algorithm design, and code implementation.
- 3. **Provide a comprehensive understanding** of essential programming concepts like data structures, control flow, and object-oriented programming principles.
- 4. **Enable students** to apply C and C++ for solving business-related problems.

UNIT - I: INTRODUCTION TO PROGRAMMING AND C LANGUAGE

Programming Concepts: Introduction, Problem Definition, Algorithm, Flowchart, Programming Languages - Introduction to C Language (Structure of a C program, Keywords, Identifiers, Data Types) - Operators (Arithmetic, Relational, Logical, Assignment, Bitwise) - Input/Output Operations (scanf, printf) - Control Flow Statements (if-else, switch, for, while, do-while) - Functions (Definition, Declaration, Function prototypes, Parameter Passing) - Arrays (One-dimensional and Multidimensional Arrays, Passing Arrays to Functions)

UNIT - II: ADVANCED C PROGRAMMING

Pointers (Concept of pointers, Declaring and initializing pointers, Pointer arithmetic) -Structures (Defining Structures, Accessing Structure members, Arrays of Structures) -Unions (Defining Unions, Differences between Structures and Unions) - Dynamic Memory Allocation (malloc, calloc, realloc, free) - File Handling (Opening, Closing, Reading and Writing files) - Preprocessor Directives (#include, #define)

UNIT - III: INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING

Object-Oriented Programming: Concepts (Classes, Objects, Encapsulation, Data Abstraction, Inheritance, Polymorphism) - Introduction to C++ Programming (Structure of a C++ program, Comments) - Defining Classes and Objects in C++ - Member Functions (Constructor, Destructor, Accessor methods, Mutator methods) - Data Hiding and Encapsulation - Inheritance: Single Inheritance, Multiple Inheritance (Concepts, Benefits, and Challenges)



UNIT - IV: ADVANCED C++ PROGRAMMING

Polymorphism (Function Overloading, Operator Overloading, Virtual Functions) - Friend Functions - Templates (Generic Functions and Classes) - Exception Handling - Introduction to STL (Standard Template Library) - Basic concepts (Vectors, Lists)

UNIT - V: APPLICATIONS OF C AND C++ IN BUSINESS

Problem-solving using C and C++ for business applications (e.g., Inventory Management, Financial Calculations) - Interfacing C/C++ programs with databases - Introduction to GUI Programming with C++ (Using a library like FLTK/QT)

Suggested Readings:

- 1. Programming in C by E.Balaguruswamy, McGrawhill 6th Edition.
- 2. Object oriented Programming with C++ by E.Balaguruswamy McGrawHill Education.
- 3. ANSI and Turbo C++ by Ashoke N. Kamthane, Pearson Education.
- 4. Computer Fundamentals and Programming in C by Reema Thareja from Oxford University Press
- 5. Mastering C by K R Venugopal and Sudeep R Prasad, McGraw Hill
- 6. Let Us C, Yashavant Kanetkar
- 7. R.Ravichandran "Programming with C++"

Learning Outcomes:

At the end of the Course, Student should be aware about the following:

UNIT I: Introduction to Programming and C Language

- **Understand** the fundamental concepts of programming (problem definition, algorithm, flowchart, programming languages).
- **Acquire** knowledge of the C language structure, keywords, identifiers, data types, operators, input/output operations, and control flow statements.
- **Develop** the ability to define, declare, and use functions in C programs.
- **Work** with one-dimensional and multidimensional arrays and pass them to functions.

UNIT II: Advanced C Programming

- Master the concept of pointers and their usage in C.
- **Define** and work with structures and unions in C.
- Allocate memory dynamically using functions like malloc, calloc, realloc, and free.
- **Perform** file handling operations (opening, closing, reading, and writing files).
- **Utilize** preprocessor directives (#include, #define).



UNIT III: Introduction to Object-Oriented Programming

- **Comprehend** the key concepts of object-oriented programming (classes, objects, encapsulation, data abstraction, inheritance, polymorphism).
- **Transition** from C to C++ programming.
- **Define** classes and objects in C++.
- **Implement** member functions (constructor, destructor, accessor methods, mutator methods).
- **Understand** the concepts of data hiding and encapsulation.
- **Apply** single and multiple inheritance in C++ programming.

UNIT IV: Advanced C++ Programming

- **Demonstrate** understanding of polymorphism (function overloading, operator overloading, virtual functions).
- **Utilize** friend functions effectively.
- Work with templates (generic functions and classes).
- **Handle** exceptions in C++ programs.
- **Gain** a basic understanding of the Standard Template Library (STL) and its components (vectors, lists).

UNIT V: Applications of C and C++ in Business

- **Solve** business problems using C and C++ programming (e.g., inventory management, financial calculations).
- **Interface** C/C++ programs with databases.
- Acquire knowledge of GUI programming with C++ using a library like FLTK or QT.



105 - PRACTICAL LAB MANUAL FOR PROGRAMMING WITH C & C++

Question Bank

- 1. Write C programs for
 - a. Fibonacci Series
 - b. Prime number
 - c. Palindrome number
 - d. Armstrong number.
- 2. 'C' program for multiplication of two matrices
- 3. 'C' program to implement string functions
- 4. 'C' program to swap numbers
- 5. 'C' program to calculate factorial using recursion
- 6. 'C++' program to perform addition of two complex numbers using constructor
- 7. Write a program to find the largest of two given numbers in two different classes using friend function
- 8. Program to add two matrices using dynamic constructor
- Implement a class string containing the following functions : a. Overload + operator to carry out the concatenation of strings. b. Overload == operator to carry out the comparison of strings.
- 10. Program to implement inheritance



MODEL QUESTION PAPER FOR INTERNAL EXAMINATIONS

Time: 90 Mins

Part - A (10 Marks)

ANSWER THE FOLLOWING QUESTIONS. EACH QUESTION CARRIES 02 MARKS (05 Questions x 02 marks = 10 Marks)

1. Nature of Management

- 2. Levels of Management
- 3. Characteristics of Planning
- 4. Types of Decisions

5. Objectives of Organizing

Part - B (2 ¹/₂ Marks)

MULTIPLE CHOICE QUESTIONS - EACH QUESTION CARRIES 1/2 MARK

- 1. The schools of management thought are theoretical frameworks for the.....
- a) Study of management b) Human Resource Management
- c) Production activities d) Engineering
- 2. When Peter Ferdinand Drucker American economist of Austrian origin, is considered as the "Father of Modern Management"?
 - a) 1910-2004 b) 1909-2005 c) 1907-2001 d) 1909-2005
- 3. Max Webber who propounded the
 - a) Bureaucratic theory of organizationb) Theory of managementc) Both a and bd) None of the above
- 4. Fredrick Winslow Taylor is considered to be "The Father of Scientific Management"?
 a) 1910-2004 b) 1909-2005 c) 1907-2001 d) 1856-1915
- 5. Which of the following involves managing the process by which raw materials, labor and energy are converted into goods and services?
 - a) Operations management b) Marketing management
 - c) Human Resource Management
 - Part C (2 ½ Marks)

d) All the above

$\mathbf{c} \rightarrow \mathbf{z}$					
MATCH THE FOLLOWING - EACH QUESTION CARRIES 1/2 MARK					
i) Management thoughts		i) "Father of Modern Management".			
ii) Peter Ferdinand Drucker		ii) Propounded the bureaucratic theory of			
		organization and management			
iii) Top Level of Management		iii) "The Father of Scientific Management"			
iv) Max Webber		iv) It encompasses an array of different functions			
		undertaken to accomplish a task successfully.			
v) Fredrick Winslow Taylor		v) It consists of the Board of Directors (BOD) and			
		the Chief Executive Officer (CEO)			



Maximum Marks: 20

Part - D (2 ½ Marks)

ASSERTION & REASON - EACH QUESTION CARRIES 1/2 MARK

1. Assertion (A): Management is a set of principles relating to its functions.

Reason (R): Management is essential to run all types of Organizations

- a. (A) and (R) both are correct; and (R) is the right explanation of (A)
- b. (A) and (R) both are correct; but (R) is not the right explanation of (A)
- c. Both (A) and (R) are incorrect
- d. (A) is Correct; but (R) is incorrect.

Part – E (2 ½ Marks) SYLLOGISM - EACH QUESTION CARRIES ½ MARK

1. Based on the following statements, which of the conclusion/s is/are correct?

Statement I: Some Leaders are Intelligent

Statement II: All the Managers are Intelligent

Conclusion 1: All the leaders are Intelligent

Conclusion 2: Some Managers are Intelligent

3.

4.

5.

6.

- a. Only 1
- b. Only 2
- c. Both 1 and 2
- d. Both 1 and 2 do not follow