

COURSE AND EXAMINATION SCHEME

POST GRADUATE DEGREE OF MASTER OF COMPUTER MANAGEMENT
(M.C.M.)

Semester – I

Sr. No.	Subject	Course Scheme			No. of Credits	Examination Scheme							
		L	T	P		Maximum Marks				Minimum Passing Marks			
						ESE	P	IA	Total	ESE	P	IA	Total
1	Commercial Practices	4	-	-	04	80		20	100	32		08	40
2	Information and Communication Technology	4	-	-	04	80		20	100	32		08	40
3	Office Automation	4	-	-	04	80		20	100	32		08	40
4	Programming Techniques with C	4	-	-	04	80		20	100	32		08	40
5	Practical-I based on Theory Paper- 2 and 3	-	-	6	03	-	E-25 I-25	-	50	-	E-10 I-10	-	20
6	Practical-II based on Theory Paper- 4	-	-	6	03	-	E-25 I-25	-	50	-	E-10 I-10	-	20

• **Internal Theory Paper Marks:** It includes Seminar, Assignment, Unit Test, Book Reviews etc
E- External Examiner Marks , I- Internal Examiner Marks

**POST GRADUATE DEGREE OF MASTER OF COMPUTER MANAGEMENT
(M.C.M.)**

SEMESTER – II

Sr. No.	Subject	Course Scheme			No. of Credits	Examination Scheme							
		L	T	P		Maximum Marks				Minimum Passing Marks			
						ESE	P	IA	Total	ESE	P	IA	Total
1	DBMS Concepts	04			04	80		20	100	32		08	40
2	System Analysis and Project Management	04			04	80		20	100	32		08	40
3	Operating System and Linux	04			04	80		20	100	32		08	40
4	Computerized Accounting using Tally	04			04	80		20	100	32		08	40
5	Practical-I based on Theory Paper-1 and 2	-	-	06	03	-	E-25 I-25	-	50	-	E-10 I-10	-	20
6	Practical-II based on Theory Paper-3 and 4	-	-	06	03	-	E-25 I-25	-	50	-	E-10 I-10	-	20

- **Internal Theory Paper Marks:** It includes Seminar, Assignment, Unit Test, Book Reviews etc

E- External Examiner Marks , I- Internal Examiner Marks

INTERNAL ASSESSMENT MARKS EVALUATION SCHEME

- The final total assessment of the candidates is made in terms of an Internal assessment (Sectionals) and an external assessment for each course.
- For each paper, 20 marks will be based on internal assessment and 80 marks for semester end examination (external assessment), unless otherwise stated.
- The division of the 20 marks allotted to internal assessment of theory papers is on the basis of the following
 - i) Home Assignment
 - ii) Class Test Examination Performance
 - iii) Seminar
 - iv) Case Studies
 - v) Group Discussion
 - vi) Field Work
 - vii) Study Tour
 - viii) Paper Presentation
 - ix) Book Review
 - x) Involvement in Departmental and College Activities
 as determined by the teacher in respective subject and moderated by Head of the Institute/Principal.

Practical & Project Examination Scheme

- i) **Time:** Minimum 2 Hours 30 Min. for conducting the practical examination subject to condition number of computers and printers available at the center ie if ratio of student and number of computer are same.
- If there are less number of computer (50%) than total Enroll students for practical examination then additional 2 hours
 - If there is less number of computer (25%) than total Enroll students for practical examination then additional 4 hours.

ii) **Practical Examination Evaluation Scheme**

- | | |
|---|-----------------|
| 1) One question to Write and Execute for Taking Printout of Program | 20 Marks |
| 2) One question to Write Program or from Practical Index | 10 Marks |
| 3) Record | 10 Marks |
| 4) Viva | <u>10 Marks</u> |

50 Marks

iii) **Project :** Head/Co-ordinator of Computer Dept. must reject any title which is already carried out in any course in the college. It must maintain a Record that lists the projects along with other detail (like Project Title, Guide, Session, Platform and Number of students working on project) that was carried out so far and must be shown to external examiner at the time of examination. *If any project found duplicate of nature then it will consider as copy and action will taken against Head/Co-ordinator. In case of Non approved lecture action will be taken against Principal of college.*

Classification of Marks on Project

Report, Documentation and Project Execution	70 % Marks
Viva voce	30 % Marks

Total Marks **100 % Marks**

Master of Computer Management (MCM)

Question Paper Scheme

Time: 3 Hours

Max. Marks: 80

Q1 Either (From Unit 1)

- a)
- b)
- Or
- c)
- d)

8 * 2 = 16

Q2 Either (From Unit 2)

- a)
- b)
- Or
- c)
- d)

8 * 2 = 16

Q3 Either (From Unit 3)

- a)
- b)
- Or
- c)
- d)

8 * 2 = 16

Q4 Either (From Unit 4)

- a)
- b)
- Or
- c)
- d)

8 * 2 = 16

Q5 Short Question (One compulsory question from each unit)

- a)
- b)
- c)
- d)

4 * 4 = 16

SEMESTER - I

Paper - I: COMMERCIAL PRACTICES

(1MCM1)

UNIT - I: Financial Accounting and Income Tax

Basic Concepts and Conventions; Accounting Process in double entry accounting System, Journal Entry, Ledger accounts, Trial Balance, Final accounts of individuals & limited Company.

Income Tax: Introduction, Basic Concepts, Capital Receipt and Revenue Receipt

UNIT - II: Cost and Management Accounting

Cost Accounting: Definition, Scope, Advantages, Limitation

Costing, Types of Costing, Method of Costing, UNIT Costing, Contract Costing, Methods of calculating profit on contract

Meaning & Role of Management Accounting, Ratio Analysis, Working Capital-Meaning, Concepts and Estimation; Break Even Analysis- Nature, Scope Uses and Limitations.

Budget and Budgetary Controls- Concepts, Nature, Scope and Importance, Preparation of Flexible Budget & Cash Budget

UNIT – III: Business Laws

Indian Contract Act 1872- Offer, Acceptance, Essentials of valid contract.

Company Laws- Formation of Company, Memorandum of Association, Articles of association, Prospectus, Shares, Debentures & Other sources of finance, Finance, Company Meeting.

Partnership Act – Salient features types of Partners, duties and liabilities of partnership, Dissolution of partnership.

UNIT - IV: Principals of Management

Concept of Management: Role and importance, Management- Art, Science & Profession;

Process of decision-making: Controlling, Decision-making, Leadership and Communication.

Functional Areas of Management,- Finance, Marketing HR & Production.

Books:

- 1) P.C. Tripathi, “ Principal of Management“, TMH, Year 2007, ISBN 13:978-0-07-060058-4
- 2) P. N. Reddy,” Principal of Management”, TMH, Year2007, ISBN 10:0-07-060058-9
- 3) R. K. Sawlikar, “Cost & Management Accounting“, Das Ganu Prakashan, Year 2003

References:

- 1) Dr. K. R. Dixit, “Business Management”, Vishawa Pub.”,Year 2006, ISBN 81-86454-46-2
- 2) Dr. S.B. Kishor, “Introduction to Commercial Practice”, Das Ganu, , 2012, ISBN-978-93-81660-0304

MCM - I
SEMESTER - I

Paper-II: INFORMATION AND COMMUNICATION TECHNOLOGY
(1MCM2)

UNIT-I: Introduction to IT and Computers

Block Diagram of Computer, Functioning of Computer, Generations of Computer, Classification of Computers, Characteristics, Advantages & Limitations of Computer.

Computer Memory: Primary & Secondary, Types of Primary Memory, Registers.

Input devices: Keyboard **Locator Device:** Mouse, Joy Stick Digitizing Tablet **Pick Device:** Light Pen, Touch Screen Track ball **Voice Recognition:** Microphone, Scanning: MICR, OCR, OMR, Barcode Reader, **Vision Capturing:** Webcam, Digital Camera Point of Scale, Touch Pad, Smart Card

Output devices: VDU, Dot Matrix, Laser and Inkjet Printers, Plotters.

Storage Devices: Pen Drive, Hard Disk, and Optical Disk, Blue Ray Disc.

UNIT-II: Hardware and Software Concept and Programming Language

Introduction, Types of Software, Characteristics of Good Program, Development of Programming Languages: Machine Language, Assembly Language, High Level Language.

Number System: Decimal, Binary, Octal, Hexadecimal number systems, features & conversions.

BCD, EBCDIC & ASCII codes.

UNIT-III: Windows

Features of Windows, GUI, Operating with Windows, Desktop, Taskbar, Windows Explorer, Control Panel, My Computer, My Documents, Recycle Bin

Windows Accessories: Calculator, Notepad, Paint, System Information, Disk Management, Disk Defragmentation, Disk Cleanup

UNIT-IV: Network & Internet

Computer Communication, Need for Networks, Communication Device, Types of Network- LAN, WAN, MAN, Concept of Network Topology, Types of Topologies and its Advantages and Limitations, OSI Model.

Internet: Basic Internet terms, Internet Addressing, Services provided by Internet, Detail about E-mail, Search Engine, Basic of Intranet.Social and Ethical Issue, YouTube, FaceBook, Linkedin, Orkut

Open Source Terminologies: Open Source Software, Freeware, Shareware, Proprietary Software, FLOSS, GNU, FSF, OSI

Books:

- 1) S.B. Kishor, “Information Technology”, Das Ganu, 978-81-921757-9-9
- 2) Peter Nortorn’s, “ Introduction to Computer”, TMH, 2004, ISBN-0-07-05-3142-0
- 3) Pradeep K. Sinha and PritiSinha “ Computer Fundamentals”, BPB, 2007, 13:978-81-7656-752-7
- 4) ChetanShrivastava “ Fundamentals of Information Technology”, Kalyani publishers, 2002, ISBN-81-7663-576-6

References:

- 1) Sanjay Saxena and Prabhpreet Chopra, “ IT Tools and Applications”,2008
- 2) Akshay Kumar, “ Information Technology and Info Guide”, Authors press,2000, ISBN-81-7273-040-3

MCM - I

SEMESTER - I

Paper-III: OFFICE AUTOMATION

(1MCM3)

UNIT–I: Office Automation

Introduction of Office Automation, Need of Office Automation

Office Automation Tools: Computer: E-MAIL, Internet For Business Conferencing, Voice-Mail, Fax Machine, Printer.

E-commerce, E-governance.

UNIT–II: Word Processing

Introduction to Word Processing, Features of MS-Word, Creating document, Opening Documents, Saving Documents, Protecting Document, Print Preview, Page Setup, Printing Document, Various Utility Option like: Undo, Copy, Paste, Cut, Select, Find, Replace, Goto, Formatting Text With : Font, Paragraph, Alignment, Line Spacing, Working with Table, Spelling and Grammar Check, Mail Merge

UNIT–III: Working with Spreadsheet

Introduction To Spreadsheet, Features of Ms-Excel, Basic of MS-Excel, Navigating around the Worksheet, Excel Toolbars and Operations, Formatting Features, Copying Data Between Worksheets, Entering and Editing Cell Entries, Various type of Charts (Column chart, Pie Chart, Line chart, Bar chart), Creation of Charts, Editing and Formatting Charts, Goal Seek. Database in Excel

UNIT–IV: Presentation Graphics

Introduction, Features of Ms-Powerpoint, Standard Toolbar, Formatting Toolbar, Drawing Toolbar, Creating Slides, Running Slides, Different types of Layout, Moving the Frame, Inserting Clip Art, Picture, Slide, Copying, Hiding, Slide Transition, Text Styling, Send to Back, Entering Data to Graph, Table, Design Template.

Books:

- 1) K.K. Bajaj, “Office Automation”, MacMillan, ISBN 13: 9780333929278
- 2) Sanjay Saxena, “MS Office in a Nutshell”, Vikas Publication, 2011, ISBN-978-81-259-5036-3
- 3) Rutkosky, Seguin, Audrey “Microsoft Office ”, BPB, ISBN-10:81-8333-228-5/13:978-81-8333-228-6

References:

- 1) Gini Courier, Annelte Marquis, “Microsoft Office”, BPB, ISBN: 8176560839
- 2) S.Jaiswal, “IT Today Encyclopedia”, Galgotia, ISBN: 9788175152700
- 3) Sanjay Saxena, “A First Course in Computers”, Vikas Publication, ISBN : 9788125914440

MCM - I

SEMESTER - I

Paper-IV: PROGRAMMING TECHNIQUES WITH C

(1MCM4)

UNIT–I: Programming Logic and Basic Elements of ‘C’ Programming

Programming Logic: Problem Analysis, Process Analysis, Conceptual Development of solution.

Development Tools: Algorithm, Flowchart

Translator: Interpreter, Compiler

Introduction to C: C-Character Set and Keyboards, Constants and Variables, Data types, Type Casting, Type Modification,

Operators and Expressions – Arithmetic, Relational, Logical Assignment, Bitwise and Increment and Decrement Operator

Input and Output statements in C.

UNIT–II: Storage Class and Control Statement

Storage Class: auto, static, extern, static

Conditional Statement: if-else, nested if, else-if ladder, switch, Ternary Operator

Looping Statement: for loop, while and do- while loop, Comma Operator and Use of break, continue and goto statements

UNIT–III: Arrays, Structure, Functions

Arrays: Definition, Initialization of array, Writing and Reading data from an array, Bounce Checking, Searching. Sorting and Merging of two array,

String: String Manipulation using string library functions.

Structure: Need of Structure, period operator, Initializing Structure, sizeof(), Arrays of Structure, Nested Structures.

Unions: Concept and applications, enum

Function: Arithmetic and String Library Function, User defined functions, use of void, Recursion.

UNIT–IV: Pointer and File Concept

Pointer: Declaring and Initializing pointer variable, Pointer Operator, Call by value and Call by Reference

Dynamic Memory Management Functions: malloc (), calloc(), realloc(), free()

Files: Concept of file, Operation on Files, Defining, Opening and closing files, Modes of Files, file handling function, Command Line Argument.

Books:

- 1) E. Balguruswami, “Programming in ANSI C”, TMH, 2009, ISBN-978-0-07-064822-7/0-07-064822-0
- 2) K.R. Venugopal and S.R. Prasad, “Mastering C”, TMH, 2008, ISBN-13:978-0-07-061667-7 / 10: 0-07-06-1667-1.
- 3) Dr. V. Godki, Dr. S. B. Kishor, "C" through Programming –Vol I& II, CreateSpace Pub. ISBN : 978-1470164805

References:

- 1) V RAJARAMAN, "COMPUTER PROGRAMMING IN C" ,PHI, 2002, ISBN-81-203-0859-X
- 2) Stephen G. Kochan, " Programming in C", CBS, /ISBN-13: 9780321566157

MCM - I**SEMESTER - II****Paper-I :DBMS CONCEPT****(2MCM1)****UNIT–I: Database Environment**

Basic Terminology, Data Processing, Traditional and DBMS Environment, Components of DBMS, Database Approach -Objectives, Benefits, Characteristics, Advantages of DBMS. Three Tier Architecture, Data Abstraction. **Database Administration:** Role, Functions, Responsibility

UNIT–II: Data Model and Design

Data Models, Record Based Logical Model, Relational Database Structure, Normalization, Normal forms, Functional Dependency, 1NF (First Normal Form), 2NF (Second Normal Form), 3NF (Third Normal Form), Relational Algebra, Codd's Rules

UNIT–III: Working With Ms-Access

Elements of an Access database - Tables, Queries, Forms, Reports, Macros. Introduction to Ms-Access, Designing Database, Crating Database using Wizard, Working with Table.**Field types** - Autonumber, Date/Time, Number, Text, Yes/No, Hyperlink. Creating Tables using Design View and Using wizard, Editing Table, Editing Records

UNIT–IV: Query and Form Designing

Query: Filtering Data, Studying different types of Queries, Specifying Criteria in Queries, Filter using multiple criteria. **Forms, Report and Macro:** Procedure to create a form, Reports and Macros

Books:

- 1) R. Panneerselvam, “ Database Management System “, PHI, 2006, ISBN : 81-203-2028-X
- 2) Dr. Madhulika Jain, Vinita Pillai, Shashi Singh and Satish Jain, “Introduction to Database Management”, BPB, 2002, ISBN: 81-7656-638-1
- 3) Bioin C. Desai, “ An Introduction to Database Management”, GP Publication, 2006
- 4) Caleste Robinson, “ Access 97”, BPP, 1998, ISBN : 81-7029-928-4

References:

- 1) Abraham Silberschatz, Henry F. Korth, S. Sudarshan, “ Database System Concept “, McGraw Hill, 2002, ISBN : 0-07-228363-7.
- 2) C.J. Date, A. Kannan, S. Swamynathan, “ An Introduction to Database system”, Pearson, 2008, ISBN : 978-81-7758-556-8
- 3) Sanjay Saxena, “MS Office 2007 in a Nutshell”, Vikas Publication, 2011, ISBN-978-81-259-5036-3
- 4) Rutkosky, Seguin, Audrey, “Microsoft office 2007”, BPB, ISBN-10:81-8333-228-5/13:978-81-8333-228-6

MCM - I**SEMESTER - II****Paper-II: SYSTEM ANALYSIS AND PROJECT MANAGEMENT****(2MCM2)****UNIT – I: System Concepts**

Systems Concepts: Systems approach, characteristics, Types of Systems; Elements – Input, Output, Environment, Boundary Interface, Feedback & Control; MIS, Types of MIS: TPS, OAS, DSS. KWS, Data and Information, Value of Information, Information Life Cycle, Data Vs Information,

UNIT – II: System Analysis

System Analysis: System Development Life Cycle (SDLC), Information Gathering (Sources, Methods, Interviews, Questionnaires, Observation, Document Analysis etc.), Feasibility study,

Analysis (PARIS model), Design, Implementation, Planning and Control for System success. Tools of Structure Analysis (Data Flow Diagram, Data Dictionary, Decision Tree, Decision Table, CASE tools)

UNIT – III: System Design & Implementation

System Design: System Design Principle, Input Design, Output Design, Form Design

Implementation: Testing, Level of Testing, Nature of Test Data, Conversion, User Training, Hardware and Software Selection

Documentation, Types of Documentations, Quality Assurance, Privacy, Disaster Recovery Plan, Maintenance Review

UNIT – IV: Project Management

Introduction, Management Spectrum, Project Manager, Project Estimation, Project Scheduling

Quality Management: Quality Concept, Software Quality, Software Reliability, ISO 9000 Quality standards

Books:

- 1) S. Sadagopan, "Management Information System", PHI, ISBN, 8120311809
- 2) Goyal, "Management Information System", ISBN 0333 933885
- 3) Jawdejar, "Management Information System", TMH, ISBN 0-07-044575-3
- 4) Elias Award, "System Analysis & Design", Golgotha Publication, 2nd Edition, ISBN: 81751568-X

References:

- 1) RogernPressman, "Software Engineering Practition Approach", ISBN 007-124083-7
- 2) Rajib Mall, "Fundamental of Software Engineering", PHI, 2nd Edition, ISBN-978-81-203-2445-9

Paper-III:OPERATING SYSTEM AND LINUX

(2MCM3)

UNIT – I: Introduction to Operating System

Introduction to Operating System, Definition, Need, Functions, Types of Operating System, Simple Batch System, Multiprogramming , Time sharing system, Parallel system, Distributed systems, Real-Time system, Multiprocessing, On-line and Off Line Processing, Multitasking, Virtual Memory Management.

UNIT – II: Introduction to DOS

Introduction to Disk Operating System (DOS), File Types, Directory Structure, Booting - Warm and Cold Booting, Types of DOS commands (Internal and External)

Directory commands: DIR, MD, CD, RD, TREE, PATH, SUBST. Use of Wildcard

File Management Command: COPY, DEL, ERASE, REN, ATTRIB, XCOPY, BACKUP and RESTORE.

General commands: TYPE, DATE, TIME, PROMPT,VER. Batch commands & its purpose.

UNIT - III: Linux

Structure of Linux Operating System, Exploring the directory structure, Naming files and directories

Shell: Bourne, Korn and C-Shells

File System Commands:ls, mkdir, rmdir, cd, cat, mv, cp, rm, ln, pwd, more

Text editing with vi editor

UNIT IV: Shell Scripts

Pipe and Filters: sort, grep, egrep**Permission modes:**chmod, chown, chgrp**Process:**ps, kill

Communication, **Shell Scripts:** Variables, Arithmetic in Shell Script, Control flow statements, Shell Parameters

Books:

- 1) TANENBAUM, “MODERN OPERATING SYSTEMS”, PHI, 2nd EDITION”, 2007
ISBN 81-317-0176-X

- 2) Peterson Richard, "The Complete References Linux", 4th Edition., TMH, 2000, ISBN-13: 978-0072129403
- 3) Craig and Coletta Witherspoon, "Teach Yourself Linux", Techmedia, 3rd Edition, ISBN: 81-7635-499-6
- 4) Cox K, "Red Hat Linux Administrator's Guide", PHI, 2001, ISBN 13: 9780761521570

References:

- 1) Sillberschata, Galvin, Gange, "Operating System Concept", John Willey and Sons, 2001, ISBN 9971-51-388-9
- 2) Tackett, Burnett, "Using Linux", PHI, Fifth Edition, 2001, ISBN 81-203-1653

MCM - I

SEMESTER-II

Paper-IV: COMPUTERIZED ACCOUNTING USING TALLY

(2MCM4)

UNIT-I: Introduction to Computerized Accounting

Introduction to Accounting, Features of Accounting, Classification of Accounts, Books of Accounts, Financial Statement, Accounting Organization, Need of Computerized Accounting, Features of Computerized Accounting, Manual v/s Computerized Accounting

UNIT-II: Accounting software's and Configurations

Introduction to Tally, Features of Tally, Disadvantages of Tally, Tally Screen, Company information, Creating new Company, Gateway, Selection of Company, Selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features,

Configuration- General, Numeric Symbols, Voucher Entry, Creation of Voucher Screen, invoice Order Entry, Printing.

UNIT-III: Account Info and Vouchers

Accounts info menu, Account Groups- create new group, creation of primary group. Normal and advance information, Ledger Accounts, cost categories, Cost Centers. Creation of Budget, Types of

budget. VAT/CST Report generation, TDS and Service Tax Voucher- Voucher Entry, creation of Vouchers Screen, types of Voucher, Selection of Voucher types, Post Dated Voucher, printing of Vouchers, Cheque Printing, advance Features of account Voucher.

UNIT-IV: Inventory Info, Security

Inventory info, Features of Inventory info, Configure- Inventory Info, Stock Item, Stock Group, Stock Category, godown, balance Sheet, Audit Trail, Ratio Analysis. Display-Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export, Export of Data. Maintenance- Bank Reconciliation, Security- Users and Password, Security Controls, Types of Security, Creation New Security Levels and Tally Audit.

Books:

- 1) S.B. Kishor, Computerized Accounting Tally”, Das Ganu, ISBN 978-93-81660-16-4
- 2) K.K. Nadhani, “IMPLEMENTING TALLY 6.3”, BPB, 2006, ISBN 81-7656494-X
- 3) Anthony R-N. and J.S. Richard, “Accounting Principle”, Irwin Inc. Publication.
- 4) K.K. Nadhani and A.K. Nadhani, “Tally Tutorial”, BPB, 2005, ISBN 81-7656-516-4

References:

- 1) M.C. Shukla, T.S. Grewal and S.G. Gupta “ Advances Accounts Vol-I”, S. Chand & Company, Delhi. 2005 ISBN 81-219-0396-3
- 2) P.C. Tulsian, “Advanced Accountancy”, Tata McGraw Hill Publication.