Master of Computer Management (MCM)
Semester- III Examination

Sr. No.	Subjects	Course Scheme			No. of Credits	Examination Scheme					Minimum Passing Marks
						Maximum Marks					
		L	T	P		ESE	P		IA	Total	Total
							E	I			
1.	Principle Techniques and Management	4	-	-	4	80	--	--	20	100	40
2.	Front End Development with Visual Basic	4	-	-	4	80	--	--	20	100	40
3.	Oracle (SQL and PL/SQL Programming)	4	-	-	4	80	--	--	20	100	40
4.	Research Methodology and Operational Techniques	4	-	-	4	80	--	--	20	100	40
5.	Practical –I	-	-	6	3	-	25	25	-	50	20
6.	Practical -II	-	-	6	3	-	25	25	-	50	20

- Note :
  1. L- Lecture, T- Tutorial, P- Practical, IA- Internal Assessment, ESE-End Semester Examination, E-External Examiner Marks, I-Internal Examiner Marks

  2. Practical Period for the subject Information Technology-04 Periods per week/per batch of 30 students.

MCM - II (Semester – III)

Paper -1   : Principal Techniques and Management

Paper-2   : Front End Development with Visual Basic

Paper-3   : Oracle (SQL and PL/SQL Programming)

Paper-4   : Research Methodology and Operational Techniques

MCM - II

SEMESTER - III
Paper – I: PRINCIPAL TECHNIQUES OF MANAGEMENT
(3MCM1)   (Marks-80)

UNIT - I: Management and Organization
Concept, Process, Profession, Science or Art, Levels And Decisions Made, Planning Concept, Nature, Steps, And Characteristics of Good Plan.
Organization: Concept, Importance, Types of Organization, Authority And Responsibility, Delegation, Span Of Control, Centralization Vs. Decentralization.
Coordination: Concept Importance, Need, Principles, Methods of Effective Coordination.

UNIT - II: Marketing Management
Meaning, Nature, Scope of Marketing Process, 7Ps of Marketing;
Marketing Research – Meaning Scope, Methodology.
Marketing Plan – Formulation, Strategic Marketing Process – GE, BCG, SBU Etc. Models.

UNIT - III: Human Resource Management
Nature, Concept, Significance Of Human Factor, Human Resource Planning –Recruitment And Selection, Job Evaluation: Concept Objectives, Importance, Procedures; Merit Ration And Performance Appraisal: Need, Methods; Record Keeping: Service Records, Attendance, Absenteeism, Time Keeping HRA.

UNIT - IV: Business Communication
Process, Objectives, Significance, Types, Barriers to Effective Communication, Listening and Interpersonal Skills, Negotiations: Bargaining. Compromise, Lose-Lose and Win-Win Orientation, Elements of Negotiation, Making Presentations, Writing Letter.
Report Writing: Elements of Report, Framework, Structure Of Report, Types; Steps In Writing
Report.

Books :
1) V.P.Michel ,"Principles of Management", PHI
2) Chandra Bose ,"Principles of Management and Administration", PHI, ISBN: 978-81-203-1929-5
3) P C Tripathy, P N Reddy, "Principles of Management" ,TMH, ISBN: 9780070220881
4) S.B. Kishor, "Principal Technique and Management", Das Ganu, ISBN : 978-93-81660-02-7

References:
1) Mohan, "Deveploment of Communication Skills",Mcmillan, ISBN: 9780230639089.
2) C.B.Memoria, "Marketting Management", KitabMahal, ISBN : 81-225-0138-9
3) AshaKaul ,"Effective Business Communication",PHI, ISBN: 978-81-203-1709-3

MCM - II
SEMESTER-III
Paper- II: FRONT END DEVELOPMENT WITH VISUAL BASIC
(3MCM2)   (Marks-80)

UNIT-I: Introduction to Visual Basic
Integrated Development Environment (IDE) – Features, Event driven programming,
Programming Constructs: Data Types, Variable, Constant, Operator, System defined Function, Dialog Box and Creating User Interface
Control flow statement: if-then, select-case, for-next, while wend, do-loop statement. With..End With, Do Event statement

UNIT-II: VB Control and Procedure
Visual Basic Control: Form, Label, Textbox, Frame, Checkbox, Option Button, ListBox, Combo Box, Timer, Scrollbar, Picture, Image, File Controls, Artwork control
ActiveX Control: Tab Strip, Status Bar, Slider, Month View, DT Picker, Rich Text Box, Common Dialog
Procedure: Types of Procedure, Subroutine, Function, Module

UNIT-III: Menu, Interface and Array
Menu Editor, Creating Menus, Utility features provided by menu editor, modifying menu at run time, pop-up menu, Creating Toolbar using Image List
Interface: SDI, MDI,
Array: One Dimensional Array, Built-in Array function, For..Each Loop, Arrays Types

UNIT-IV: ActiveX Data Object
Use of ADO Object, ADO Architecture, Connecting ADODC to Bound Control, ADO Object Methods for Editing, Updating and Searching Data Environment, Data Report,
Debugging and Error Handling: Types of Error, Debugging, Handling Run Time Error.

Books:
1) Evangelos Petroutsos ,"Mastering Visual Basic 6 ", BPB, 2005 ISBN-81-7635-269-1.
2) MoelJerke," Complete Reference Visual Basic 6",TMH, 2004, ISBN -0-07-463666-9.
3) Steve Brown,"Visual Basic 6.0 Complete", Complete Idiot's Books, ISBN 978-0789718129

References:
1) Peter Norton's ,"Visual Basic 6.0" ,SAMS tec-Media,2006,ISBN-81-7635-150-4
2) Michael Halvorson, " Learn Visual Basic 6.0 Now",PHI, ISBN 0-7356-0729-X
3) Michael Vine ,"Visual Basic Programming – For Absolute Beginner", PHI, ISBN: 0761535535
4) Paul Sheriff ,"Teaches Visual Basic 6",PHI978-8120315624

MCM - II
SEMESTER - III
Paper – III: ORACLE (SQL AND PL/SQL PROGRAMMING)
(3MCM3)   (Marks-80)

UNIT – I: Introduction

RDBMS Concept, Introduction to Oracle, SQL Tools, Oracle as multi-User System, SQL, SQL *Plus, Getting Started with SQL, Writing SQL Commands, Components of SQL, Data Types, Database Users, Database Objects, Elements of SQL

UNIT – II: SQL Languages

Data Definition Language : Creation of Table, Viewing table Structure, Data Integrity through Constraints, Altering Table, Dropping Table, Truncating Table
Data Retrieval: Select Command, SQL Operators, Text Search, Group Queries, Order By Clause
DML Operation: Insert, Update and Delete
Transaction Control Language: Commit, Rollback, Save Point
Data Control Language: Grant, Revoke

UNIT - III: SQL Function and Database Objects

Sql *functions: Character Function, Case Manipulation, Numeric Functions, Date Function, Conversion Function, Conditional Functions, Nested Functions, Group Functions
Database Objects: Views, Sequence, Synonym
Join, Set Operator and Sub query

UNIT - IV: PL/SQL
Basic Elements of Programming, Select...Into Statement, Exception Handling: Predefined Exception, When Other Exception, Cursor: Explicit Cursor, Explicit Cursor Attributes, Subprogram and Packages, Trigger

Books :
1) S.B. Kishor, Oracle (SQL/& PL/SQL Programming)”, Das Ganu, ISBN 978-81-921757-5-1
2) Ivan Bayross,“ Oracle Developer 2000”, BPB, 2006, ISBN : 8/7029-899-7

References :
1) Paul Hipsley, “Developing Client / Server Applications with oracle Developer/2000 TM”, Techmedia, 1997, ISBN – 81-87150-02-X
2) Ivan Bayross,“ Commercial Application Development using Oracle Developer 2000 Forms 6i”, BPB, 2003, ISBN : 81-7656-742-6

MCM - II
SEMESTER - III
Paper- IV: RESEARCH METHODOLOGY AND OPERATIONAL TECHNIQUES
(3MCM4)   (Marks-80)

UNIT-I: Introduction to Research Methodology
Meaning, Objectives, Motivation In Research, Types, Approaches, Importance, Research Methodology, Scientific Research, Process, Criteria For Good Research, Problems Encountered, Defining Research Problem, Developing Research Proposal, Research Design: Meaning, Need, Features, Important. Six P of Research, Sampling

UNIT-II: Quantitative Techniques
Need, Importance, Limitations, Management Decisions an Quantitative Techniques; Measures of Central Tendency (Mean, Mode Median) Measures of Dispersion (Range, Mean Deviation, Standard Deviation)
Decision Theory: Certainty, Uncertainty Risk, **Decision Tree**: Concept And Application.
Forecasting Techniques: Need, Importance, Methods-Moving Averages, Regression Analysis and Trends Etc.

UNIT –III: Linear Programming And Allocation Models
Introduction, Requirement Applications, Formulation, Solution by Graphical and Simplex
Allocation Models: Assignment and Transportation Problems
Project Management: Introduction, Network Analysis, PERT/CPM Method, Resource Leveling and Smoothing –Concept and Methodology.

UNIT –IV: Inventory Control, Simulation And Queuing
Inventory Control: Concept, Cost Elements, Inventory Process and Graphical Representation, EOQ Modes
Simulation: Concept, Use of Random Number, Use of Computers In Simulation.
Queuing: Introduction, Classification and MM1/FIRO Model.

Books:
1) Kothari .C.R, "Research Methodology-Methods and techniques", New Age Publications, ISBN-978-81-224-2488-1
2) J.K. Sharma, " Operation Research Problems and Solutions", Macmilan, ISBN 9781403931511
3) V.K. Kapoor ,"Operation Research" ISBN: 0470112689
4) Panerselvam ,"Operation Research",PHI, ISBN 81-204-1251-6

References:
1) Sancheti & Kapoor,"Business Statics" , S. Chand & Sons, ISBN 81-219-2456-1
2) KantiSwarup, P.K. Gupta, Man Mohan,"Operation Research", Sultan Chand & Sons, ISBN-81-8054-535-0
3) J.K. Sharma , "Quantitative Techniques For Managerial Decision",Macmilan, ISBN: 090195446740

Practical Based on Visual Basic

1. Design a form to accept First, Middle and Last Name and display the full name (Concatenate three text box) on Label when users click on Command Button.
2. Design an application that gives five choices of colors. Design an application to choose any one color using option button and change the Fore Color of Text Box.
3. Write an application to add and remove the name of city from combo box
4. Design a VB screen, to display current time in digital format continuously after every one second and change the background color of form.
5. Build the application, which marquee the caption of Form
6. Build the application, to convert the Fahrenheit temperature selected through scrollbar value into corresponding temperature is Celsius.
7. Build a application that collects marks for five different subjects. Calculate total, If total is >= 500 display message" You are allowed" otherwise display "You are not allowed."
8. A book stall gives discount on the books as per the following conditions,
   a)No. of Books Purchased   Discount
      1. <=5   Nil
      2. >5 and <=10   10%
      3. >10 and <=15   12%
      4. > 15   20%
   b. Create a form as follows to calculate the Discount
9. Build the VB application that converts a number entered into the Textbox to Octal, Hexadecimal and Decimal.
10. Build the application, to accept the password within time limit say 8 second otherwise display a message time elapsed.
11. Build the application using timer for personal appointment remainder while working with computer system.
12. Evaluate following sin(x) series
$$Sin(x) = x - x^3/3! + x^5/5! - x^7/7! + x^9/9! - \ldots\ldots$$

13. Build the application, to change the color of Frame using RGB function from the values that are set by 3 Scroll bars.

14. Build a Calculator application to perform basic arithmetic operation

15. Build the application, to accept the temperature of Number of days passed in the current month and determines the highest and average temperature.

16. Demonstrate the working of data bound controls

17. Create a data bound control application to perform various data operation using DAO Control. Assume Database Name and Table Name is Donor having 4 fields Donor_Number, Donor_Name, Date_of_Birth, Donor_Blood and Sex.

18. Create a data bound control application to perform various data operation using ADO Control. Assume Database Name and Table Name is Donor having 4 fields Donor_Number, Donor_Name, Date_of_Birth, Donor_Blood and Sex.

19. Write an application to divide the number by another and it must be able to handle any error that may arise during run time.

PRACTICAL -I BASED ON (SQL& PL/SQL)

A. Create table DONAR with following fields (Dno, Dname, City, Age, Sex, BG, Quantity, date).

B. Insert the following records into the table DONAR.

Dno	Dname	City	Age	Sex	BG	Quantity	Date
101	RAJESH RAO	CHANDRAPUR	28	M	O+ve	100	25-AUG-11
102	ANAND SHARMA	NAGPUR	20	M	O+ve	200	26-AUG-11
103	VISHAL DESHPANDE	HYDERABAD	23	M	O-ve	250	26-AUG-11
104	SHRUTI RAKHUNDE	CHANDRAPUR	22	F	A+ve	100	27-AUG-11
105	ANUSHREE DHAKATE	-	22	F	A-ve	200	26-AUG-11
106	VIJETA DHAKATE	BALLARPUR	22	F	O+ve	100	25-AUG-11
107	AAMIR TAJA	CHANDRAPUR	21	M	O+ve	250	27-AUG-11
108	AMIR KHAN	DURGAPUR	25	M	O+ve	100	25-AUG-11

C] Perform following queries on above table.

1. Find all donars whose name starts between alphabets 'A' to 'S'.
2. Find all donars who belongs to city CHANDRAPUR.
3. Find all donars who does not belongs to CHANDRAPUR city.
4. Find all donars who belongs to either CHANDRAPUR or NAGPUR city.
5. Find all donars whose city value contains NULL.

6. Arrange all donars in the sorted order whose age is between 18 and 22.
7. Find all male donars.
8. Find all male donars having O+Ve blood group.
9. Find all donars who donated the blood between 25-AUG-10 and 26-AUG-11.
10. Find all donars who donated more than 100 ml of blood.
11. Find all female donars who belong to city CHANDRAPUR having blood group 'O+Ve' in the sorted order of city?
12. Display all donars according their age.
13. Display the donar list in recent order of donation date.
14. Display all distinct blood group type.
15. Update the age of all donars by 1.
16. Mr. RAJESH RAO changed his name as RAMESH RAO and he is shifted to DURGAPUR. Note the above changes in the table.
17. Due to certain reason all the donars who donated the blood on date '26-AUG-11' are rejected. Hence delete their information.
18. Find the donars names whose first name starts with letter 'A' and ends with 'D'irrespective of case letter.
19. Find the donar names whose last name starts between alphabets 'D' to 'S' (Ex. DESPANDE, SHARMA)
20. Find total number of donars having O+Ve group.
21. Find total quantity of blood of group A+Ve.
22. Average age of female donar of O+Ve group by rounding the age to next digit.
23. Display all donars who name pronounces like 'AAMIR';
24. Find the donars who donated the blood in the month of AUG.
25. Find the donars who donated the blood on 15th Aug. of year.

Functions

Perform following queries on table donar (Functions)

1. Find the donar names whose first name starts with letter 'A' and ends with 'D' irrespective of case letter.

   (Ex. ANAND) Hint: Use SUBSTR and INSTR function to extract first name.

2. Find the donar names whose last name starts between alphabet 'D' to 'S'

   (Ex. DESHPANDE, SHARMA)
   Hint: Use SUBSTR and INSTR function to extract first name.

3. Find total number of donars having O+ve group.

4. Find total quantity of blood of group A+ve.

5. Average age of female donar of O+ve group by rounding the age to next digit.

   Hint: use Ceil function to round the age to next digit.

6. Display all donars who name pronounces like 'AAMIR';

7. Find the donars who donated the blood in the month of AUG.

8. Find the donars who donated the blood on 15th Aug. of year.

9. Display all donar names in lowercase.

10. Find donars whose first name is five characters long.

11. Find every 3rddonar in the list. Donar numbers are assigned as consecutive no.

   Hint: ………… where mod (dno,3) = 0

ORACLE (PL/SQL)

1) Create following Tables and Execute the respective PL/SQL blocks.
   o Create table employee with the fields (empno, ename, job, hiredate, jadate&sal).
   o Create table Math with fields (numb, square, cube &square_root).
   o Create table Patient with fields (p name, age, prescription).
   o Create table Musicalbum with fields (title, hero, singer, qth).
   o Create table Stu with fields (name & marks).
   o Create table errorh with fields (error_no& description).

   o Create a table DONAR where following fields(Donar no., donar name, city, age, Sex, Blood group, quantity of blood given, date of donation)

2) Write a PL/SQL block to accept employee number and display his/her job, joining date and salary of employee. Define the variable using % rowtype.

3) Write a PL/SQL block to accept three paper marks and display result if student scores more than 35 marks in each paper and also specify the class.

4) Write a PL/SQL block to find the square, cube, square root of nos.bet 1 & 25 using loop.

5) Write a program to divide a number by character number. If any error occurs it should be handled properly, and store the error number and its description in a table called errorh.

6) Write a PL/SQL block to accept and insert a valid data into the table patient. Write appropriate user defined exception.

7) Write a PL/SQL block, to display only title and quality of all album stored in the table music album.

8) Write a PL/SQL to delete the records from table music album where quantity is less than 4 using cursor.

9) Write a PL/SQL block to display the employee all having salary>some value. The value some value can be passing during execution or through bind variable.

10) Write a PL/SQL block to accept the title and display other information; it must handle the exception properly.

11) Write a procedure to swap two numbers.

12) Write a procedure to insert values into a table stu. Write a PL/SQL, main program to call the procedure stu insert.

13) Write a function which is able to perform addition of two numbers.

14) Write a function which is able to perform addition of two numbers as well as addition of three number   using default argument concepts.

15) Write a package, which contain two procedures.

16) A procedure which display the data of stu.

17) A procedure which store the data into the table stu.

18) Write trigger before inserting or updating a name into the table stu name will be automatically converted into uppercase.

19) Write a trigger on a table stu, that whenever user try to insert a marks of math either less than zero or   greater than 100 a trigger must fire before insertion or updating of records.

20) Use DONAR table and write a PL/SQL block to accept donar number and display the donar detail and find how many days it pass from the last donation.

21) Write a PL/SQL block to accept donar number, donar name, city, age, sex,

blood group, quantity and date of donation and store the data into the

table DONAR. Use user defined exception for handling various exception like donar name should not be blank, age of donar should be at least 18 years and so on. Also use STORAGE_ERROR exception to check storage is available or not.

22) Write a PL/SQL block to accept donar name and display the information of donar. If duplicate or no donar found then proper exception should be raised.

23) Create a procedure that displays the information of donar by accepting

donar number.

24) Write a trigger which will not allow the user to work on table DONAR during period say 9 am to 9:30 am, on any day.

25) Write a trigger on a table Donar, that whenever user try to insert a quantity greater than 500 ml a trigger must fire before insertion or updation of records.