Master of Computer Management (MCM)
Semester- IV 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.	E-Commerce and Web Designing	4	-	-	4	80	--	--	20	100	40
2.	Java Concept	4	-	-	4	80	--	--	20	100	40
3.	Electives: 3.1 VB. NET 3.2 Android Application Development 3.3 Enterprise Resource Planning	4	-	-	4	80	--	--	20	100	40
4.	Project	4	-	-	6	--	50	50	--	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 – IV)

Paper-1   : E-Commerce and Web Designing

Paper-2   : Java Concepts

Paper-3   : Electives:
  3.1 VB.NET
  3.2 Android Application
    Development
  3.3 ERP

Paper-4   : Project

MCM - II
SEMESTER - IV
Paper- I: E-COMMERCE AND WEB DESIGNING
(4MCM1)   (Marks-80)

UNIT-I: E-Commerce and Introduction to Internet

E-Commerce- Introduction, Application, Definition, Benefits of E-Commerce, Impediments of E-Commerce, Difference between Traditional and Electronic Commerce, E-Commerce Service,

Electronic Data Interchange (EDI): Introduction, Benefits, Value Added Services (VAS), On-line Payment Services, Trade Cycle.

Introduction - Internet, Basic Internet Terms**,** Internet Addressing, Protocols, Internet Protocols, Services of Internet, Search Engine**.**

UNIT-II: Basic of HTML and Tag

Introduction to HTML - Introduction, Features of HTML, Advantages & Disadvantages of HTML, HTML Editors, Step to Create and View HTML Document, Basic Structure of HTML Program

Tags & Attributes- Nesting of Tags, Classification of HTML Tags, Block Formatting Tags.

List - Introduction to Lists, Unordered List, Ordered List, Definition List, Nested List, Difference Between Ordered and Unordered List.

Linking - Introduction, Type of Hyperlink Creation, Working with Links, Pathname and Types, Types of Linking or Anchors.

UNIT-III: Advanced HTML

Graphics in Web Page - Image Tag, Align Images, Embedding Inline Images and External Images,

Tables - Basic table tags and their related attribute

Frames- Frames, <Frame> and <Frameset> tags,

Form designs, Form Controls, Text controls, password fields, radio buttons, and check boxes. Reset and submit buttons, form control selection, option processing and text area.

UNIT -IV: CSS and XML

CSS: Defining style sheets features, adding style to document, Unlink to a single sheet

XML: Introduction. XML and SGML, Design goals of XML, Application of XML; XML Software, XML tags, Structure of XML documents

Namespaces: Qualified name and unqualified names, Namespace scope, default name space, working with formatting

Working with DTD: Introduction, HTML and DTD, Benefits of the DTD, Structure. of DTD, and Declarations of variable in DTD Element name, Occurrence indicators, Connectors,

Books:

1) Greenstein and Feinman," Electronic Commerce", TMH, 2000,TMH, ISBN-0-07-042141-2,.
2) Bhushan Dewan, "E-Commerce by ", S.Chand,2001, First Edition, ISBN - 81-219-2083-3,

References:

1) Complete HTML, BPB, 2010, ISBN-13:978-0-07-070194-6.
2) C.Xavier, "Web Technology and Design",TMH,2010, ISBN-13:978-81-224-1450-9
3) S.B. Kishor, "E-Commerce and Web Designing", Das Ganu, ISBN : 978-93-81660-52-2

MCM - II
SEMESTER - IV
Paper – II: JAVA CONCEPTS
(4MCM2)   **(Marks-80)**

UNIT – I: Introduction to Java

History of Java, Features of Java, JDK Environment, the Java Virtual Machine, Garbage Collection

Programming Concepts of Basic Java: Identifiers and Keywords, Data Types in Java, Java coding Conventions, Expressions in Java, Control structures, decision making statements, Arrays and its methods

UNIT – II: Objects and Classes

Object Fundamentals, Pass by value, 'this' reference, Data Hiding and Encapsulation, Overloading, Overriding Constructors, Finalization, Subclasses (Inheritance), Relationship between super class object and subclass object, implicit subclass object to super class object Conversion, Dynamic method dispatch.

Language Features: Scope rules, Static data, Static methods, Static blocks, Modifiers of Class, Method, Data Members and Variable, Abstract Classes, Interfaces, Packages, Importing Packages and Classes, User define packages.

UNIT – III: Exception Handling & Multithreading

Types of Exceptions try, catch, finally, throws keywords, creating your own exception, exceptions and Inheritance

Multithreading: Multithreading Concept, Thread Life Cycle, Creating multithreading Application, Thread Priorities, Thread synchronization.

UNIT – IV: Abstract Window Toolkit & Streams and File I/O

Abstract Window Toolkit: Components and Graphics, Containers, Frames and Panels, Layout Managers-Border Layout, Flow Layout, Grid Layout, Card Layout, AWT all Components, Event Delegation Model, Event Source and Handlers, Event Categories, Listeners, Adapters-Anonymous Classes, Applets-Applet Life Cycle, Applet Context, Inter applet communication.

Streams and File IO: Files and Stream, Stream classes, Reader Writer classes, File class Tests and Utilities, Serialization and deserialization.

Books:
1) Cay S Horstmann Gary Cornell, "Core JAVA 2 Vol -1, 2", The Sun Micro Systems Press, New Delhi, ISBN- 978-0470105559
2) Peter Van der Liden, "Just Java", The Sun Micro Systems Press, New Delhi, ISBN, 0130897930
3) E. Balguruswamy, "Programming with Java - A Primer", The Sun Micro Systems Press, New Delhi, ISBN 81-265-0931-7

References:
1) Deitel and Deitel, "Java How to Program", Prentice Hall Upper Saddle River, New Jersy 07458 (US). ISBN 0-13-034151-7
2) Jerry R Jackson Alan L, "Java by Example 1.2", McClellan Publication

MCM - II
SEMESTER - IV
Paper – III: ELECTIVES (VB.NET)
(4MCM3)   (Marks-80)

UNIT –I: Introduction to .NET

Introduction to .NET Framework, Basic Functionality of CLR, MSIL, About Platform Independency, Language Interoperability, CTS and CLS, .NET Languages, Assemblies, Garbage Collection, Architecture of GC and Application Domain

UNIT- II: Visual Studio.NET

WPF Designer and Windows Form Integration, Multi-Framework Targeting, Better Intelligent Support, Refactoring and Enhancements, Visual Studio Split View, Debugging the .NET Source Code

VB.NET Language: Features of VB.Net, Writing Programs in VB.Net, Compiling and Execution from Command Prompt

Data Types, Expressions and Operators: Option Statements, Basic Element of Programming (Datatypes, Variable, Constant, Control Flow Statement), Type Casting, Boxing and Unboxing, Built-in Functions in VB.Net, Sub Programs and Working with Arrays

UNIT- III: Object Oriented Programming with VB.Net

Principles of OOP, Data Encapsulation, Data Abstraction, Properties, Method Overloading, Constructors, Inheritance, Overloading and Overriding, Shadowing, Abstract Classes and Sealed Class, Polymorphism, Delegate - Unicast and Multicast, Events, Collections, Directories, Strings, String Builders, Attributes, Namespaces and Generics

Windows Applications: Introduction to System.Windows.Forms.DLL, Basic Controls and Event Driven Programming, Programming with Advanced Controls. **Windows Control Library, Error Handling:** Structured Error Handling, Error Categories, Debug and Trace Classes, Code Optimization, Testing Phases and Strategies

UNIT- IV : Data Access with ADO.NET

Introduction to Access Libraries DAO,RDO,ADO, Limitation of ADO, ADO.Net Objects and Usage, ADO.Net Managed Providers, Data Reader, Data Adapter and DataSet, Data Relation and DataSet, Data Binding, Connected and Disconnected Environments, Connection Pooling, ADO.Net Exceptions, Using Stored Procedures, N-Tier Database Application, ADO.Net and XML.**File Stream, Windows Services, Crystal Reports**

Books:
1) David I. Schneider, "An Introduction to Programming Using Visual Basic .Net", PHI, ISBN 81-203-2159-6
2) ShirishChavan, "Visual Basic .NET", Pearson, ISBN 81-317-1391-1
3) Mastering Crystal Report - BPB Publication, ISBN 13 9788176567091

References:
1) Jefrey R. Shapiro, "The Complete Reference -Visual Basic .NET", TMH, ISBN-0-07-049511-4
2) Anne Prince and Doug Lowe, "Murach's VB.NET Database Programming with ADO.NET".
3) Crystal Report – The Complete Reference, TMH

MCM - II
SEMESTER - IV
Paper – III: (ELECTIVES) ANDROID APPLICATION DEVELOPMENT
(4MCM3)   (Marks-80)

Unit-I:Introduction to Open Source & Android
Introduction to Open Source: What is Open Source, License Issues (MPL, GPL, and LGPL) and Open Source Vs Traditional Development Methodologies..**Introduction to Android:** Introducing Android, History of Mobile Software Development, Open Handset Alliance, The Android Platform, Layers of Android, Android SDK, Kinds of Android Components, Building a Sample Android Application.

Unit-II: Android Application Design Essentials
Anatomy of an Android Applications, Android Terminologies, Application Context, Activies, Services, Intents, Receiving and Broadcasting Intents, Android Manifest File and its common settings, Using Intent Filter, Permissions, Managing Application resources in a hierarchy, Working with different types of resources.

Unit-III: Android User Interface Design Essentials
User Interface Screen Elements, Designing User Interfaces with Layouts, Drawing and Working with Animation.

Unit-IV: Using Common Android APIs
Using Android Data and Storage APIs, Managing data using SQLite, Sharing Data Between Applications with Content Providers, Using Android Networking APIs, Using Android Web APIs, Using Android Telephony APIs.

Books:
1. Lauren Darcey and Shane Conder, "Android Wireless Application Development", Pearson Education, 2nd Edition, 2011.
2. W. Frank Ableson, RobiSen, Chris King, "Android in Action", 2nd Edition, Manning Publications Co., 2011, ISBN 978-1-935182-72-6.
3. Chris Haseman, "Android Essentials", Apress Publications, 2008, ISBN-13: 978-1-4302-1064-1.
4. James Steele, Nelson To, "The Android Developer's Cookbook-Building Applications with the Android SDK", Addison-Wesley Publications, 2011, ISBN-13: 978-0-321-74123-3.

References:
1. Lucas Jordan, Pieter Greyling, "Practical Android Projects", Apress Publications, 2011, ISBN-13: 978-1-4302-3243-8.
2. Reto Meier, "Professional Android 2 Application Development", Wiley India Pvt. Ltd., 2011.
3. Mark L Murphy, "Beginning Android", Wiley India Pvt Ltd, 2009.
4. ZigurdMednieks, Laird Dornin, G. Blake Meike& Masumi Nakamura, "Programming Android", O'Reilly Publications, 2011.
5. Sayed Y Hashimi and SatyaKomatineni, "Pro Android", Wiley India Pvt Ltd, 2009.

MCM - II
SEMESTER - IV
Paper – III: (ELECTIVES) ENTERPRISE RESOURCE PLANNING
(4MCM3)   (Marks-80)

UNIT- I: Curtain raiser to ERP
Enterprise an Overview: Introduction, Business functions and Business processes, Integrated Management information, Role of the enterprise in implementing the ERP system
Introduction to ERP: Introduction, common ERP myths, a brief history of ERP, Advantages of ERP, over expectations in ERP
Basic Concepts of ERP: Introduction, Importance to a company, ERP market, Value of ERP

UNIT-II: ERP: A Deep Glance
Risk and Benefits of ERP: Justifying ERP investments, Benefits of ERP Systems, Risk factor of ERP implementation.
ERP and Related Technology: Introduction, BPR, Data warehousing, Data mining, OLAP, PLM, SCM, GIS, Intranets and Extranets, Technology advancements and ERP security, Middleware, Computer crimes, Security and ERP, Computer Security

UNIT-III: Overview of Markets and Modules
ERP Marketplace and Marketplace Dynamics: Market Overview, Marketplace Dynamics, The changing ERP Market, Indian Scenario,
ERP – Functional Modules: Introduction, Functional Modules of ERP software, Integration of ERP, Supply Chain and Customer Relationships Applications.

UNIT-IV: ERP Implementation
ERP Implementation Basics: Introduction, Reasons for implementing ERP, Implementation Challenges
ERP Implementation Life Cycle: Introduction, Objectives, Phases of ERP implementation
ERP Implementation Process : Introduction, importance of preparation, implementing methodologies, managing the implementation, implementation strategy, Implementation plan, Risk assessment, Budget, cost, system issues, ERP Case Studies

Books
1) Alexis Leon, "Enterprise Resource Planning", TMH, 2nd Edition. 2008, ISBN- 978-0-07-065680-2
2) JyotindraZaveri**, "**Enterprise Resource Planning", Himalaya Pub.

MCM- II
SEMESTER-IV
PROJECT
(4MCM4)

Instruction :

Towards the end of the second semester of study, a student will be examined in the course
"Project Work".

a. Project Work may be done individually Orin groups (**Maximum2students**) in case of bigger projects. However if project is done in groups, each student must be given a responsibility for a distinct module and care should be taken to monitor the progress of individual student.

b. TheProjectWorkshouldbedoneusingthetoolscoveredinMasterofComputerApplication

c. The Project Work should be of such an ature that it could proveuse ful orber elevant from the System-oriented/Application/commercial/ management angle.

d. The project work will carry100 marks.

e. The external viva-voce examination for Project Work would be held as per the Examination Time Table of the second year of study ,by a panel of on external and one Internal examiner.

f. Head/Co-ordinatorofComputerDept.mustrejectanyprojecttitlewhichwasalready carried out in any computer course in the college. It must maintain Record that lists the projects along with other detail (like Guide, Session, and Number of students working on project etc) that was carried outs of arand must be shown to external examiner at the time of examination.

Types of Project

As majority of the students are expected to work out a projectin some industry/research and development laboratories/educational institutions/software export companies, it is suggested that the project is to be chosen which should have some direct relevance in day-today activities of the candidate sin his/her institution. The Applications Areas of project- Financial/Marketing/Database Management System/Relational Database Management System/E-Commerce/Internet/Manufacturing/webDesigning/Hardwareand Software interaction based etc.

Project Proposal (Synopsis)

The project proposal should be prepared in consultation with the guide. The project guide must be a person having minimum Qualification MCA/M.Sc. (Computer) /M.Sc. (Maths/Electronics/Statistics/Physics+PostB.Sc.Dip.InComp.Sc.&Appl.)The project proposal should clearly state the objectives and environment to f the proposed project to be undertaken. It should have full details in the following form:

1. Title of the project
2. Objectives and Hypothesis of the Project
3. Project Category (DBMS/RDBMS/OOPS/Web Designing/Internet etc.)
4. Tools/Platform, Languages to be used
5. A complete Structure of the program:
   i. Analysis.
   ii. Numbers of Modules.
   iii. Data Structures or Tables
   iv. Process Logic.
   v. Types of Report Generation.
6. Scope of future Application.

Project Report Formulation.

1. Title Page.
2. Certificate Page.
3. Declaration Page.
4. Acknowledgment Page.
5. Index or Content Page.
6. Documentation.
   i. Introduction/Objectives.
   ii. Preliminary System Analysis. Identification of Need. Preliminary Investigation. Feasibility Study. Need of New System. Flaws in Present System.
   iii. Project Category.
   iv. Software Requirement Specification.
   v. Detailed System Analysis. Data Flow Diagram. Numbers of Modules and Process Logic. Data Structures and Tables. Entity-Relationship Diagram.
   vi. System Design. Source Code. Input screen& Output Screen. Vii Validation Checks.
   Viii Implementation, Evaluation and Maintenance.
   Ix Security Measures taken.
   X Future Scope of the project. xiBibliography

Appendix

O Survey Questionnaire

<div align="center">

M.C.M-II
SEMESTER- IV
PAPER-5: Practical-I
(4MCM5)   **(Marks-50)**

</div>

PRACTICAL –I BASED ON WEB DESIGNING & JAVA

Web designing

1) Demonstrate of Logical Format Tag.

2) Demonstrate of Physical (Formatting) style tag

3) Demonstration of Level of Headings

4) Demonstration of Block Alignment

5) Demonstration of ADDRESS tag.

6) Demonstrate the Font Face, Color and Size.

7) Demonstrate the <HR> Tag

8) Demonstrate the Alignment

9) Demonstrate the Scrolling tab using Mercury.

10) Demonstrate of Order List

11) DEMONSTRATE FOR INTERNAL LINKING

<div align="center">

GONDWANA UNIVERSITY

GADCHIROLI

</div>

COURSES OFFERED

- [ARTS](#)
- [COMMERCE](#)
- [SCIENCE](#)

ARTS

1. ENGLISH
2. MARATHI
3. HINDI

COMMERCE

1. ECONOMICS
2. STATISTICS
3. ACCOUNTS

SCIENCE

1. PHYSICS
2. CHEMISTRY
3. MATHEMATICS

12) DEMONSTRATE THE USE OF TABLE

COLLEGE

COLLEGE					
FYJC			SYJC		
ARTS	COMMERCE	SCIENCE	ARTS	COMMERCE	SCIENCE
58	150	90	75	200	100

13)DEMONSTRATION OF BROWSING BY CATEGORY

BROWSE BY CATEGORY

- WINDOWS
- OFFICE
- DEVELOPER
- IT PROFESSIONALS
- BUSINESS USER
- HOME USER
- HARDWARE
- GAMES AND XBOX
- TRIAL SOFTWARE
- ALL PRODUCTS

14)PROGRAM FOR DESIGNING A SIMPLE FORM

NAME

ADDRESS

DOB

HOBBIES ☑SPORT

☑CHESS

SAVE

15) Demonstrate the Master page to link another page.

16) Demonstrate link to website.

17) Demonstrate to compose mail.

18) Demonstrate to show or load inline image say sunset.jpeg

19) Demonstrate of Image Hyperlink

20) Demonstrate of Basic table.

21) Demonstration of cell padding attributes

22) Demonstration of Link in the page.

23) A HTML Program to show static linking the web page should contain Title, green background and a link which taken you to another page.

Practical List on JAVA Concepts

1. Write a java program to find largest among three numbers.
2. Write a java program to check whether seller made or loss, if sales price and purchase price is inputted through keyboard.
3. Write a java program to print following output.
   ```
   A
   A  B
   A  B C
   A  B C D
   A  B C D E
   ```
4. Write a java program to no. of evens and no. odd numbers in an array of size 10. Also calculate sum of evens and sum of odds.
5. Write a java program to find sum of prime numbers ranges from 1 to 100.
6. Write a java program to create a class " Student" with rollno,sub1,sub2,sub3 as data members and get Data() and print Data() as member functions.
7. Write a java program to create a class " Box" with width, height and length as data members and get Box() and print Box() as member functions.
8. Write a java program to design a Box Class with overloaded constructor
9. Default constructor
10. Constructor with one argument.
11. Constructor with three arguments.
12. Design a package " My Package" and write two class MyClass1 and MyClass2 with appropriate members and add these classes to My Package Package.
13. Design a Interface " MyInter" and add two methods sum() and mult() for two integers in it.
14. Write a java program to demonstrate the try…catch mechanism.
15. Write a java program to show use of throw, throws and finally keyword.
16. Write a java program to demonstrate Threads using Thread class and also with Runnable interface.
17. Write a java program which shows the use of synchronization.
18. Design a user interface using applet to accept two values and calculate sum of these numbers.
19. Design a user interface using applet which accepts a number and program will calculate square and cube of given number and also display in respective textbox.
20. Write a java program to which read a data from a file and print contents of a file on VDU.
21. Write a java program to read the contents of a one file and copied to another.
22. Write a java program to read the contents from given URL.
23. Write a java program to create Client and Server program to communicate each other.

M.C.M-II
SEMESTER- IV
PAPER-6: Practical-II
(4MCM6)   (Marks-50)

Practical -II Based (Elective Paper VB. Net)

1. A console application to print star in triangular format.

2. A console application to convert a number into string.

3. Write a program for Binary Search.

4. Write a program to merge two different arrays.

5. Write a program add the graphics in given form.

6. Write a program to count character A to Z from given text.

7. Write a program to handle interaction of two forms.

8. Write a program to store two lists of names and merge them into third list.

9. Write a program to create histogram, a file should hold years and values.

10. Write a program to find the currency of selected country using database connectivity.

11. Write a program to save and load the table using database connectivity.

12. Write a program to handle three files at a time by differentiating using password.

13. Write a program to change the dimension of one array into another using Re Dim statement.

14. Write a program to insert Menu strip.

15. Write a program to access the data from the given database to the current working window using data grid.

16. Write a program to handle text file info in the given window.

Practical List Based (Elective Paper Android Application)

1. Testing your android development environment perform following operations.

      a. Add the sample application to a project in your eclipse workspace.

      b. Create an Android Virtual Device (AVD) for your sample project.

      c. Create a launch configuration for your sample project.

      d. Run your sample application in Android Emulator.

2. Write a program to build your first Android Application "Hello World" with common activity.

3. Write a program which will implement Sub menu in android application.

4. Write a program which will implement Context menu (Floating List of Menu Items) in android application.

5. Write a program to displays the use of Relative Layout Views with different attributes.

6. Write a program to displays the use of Linear Layout Views with different attributes.

7. Write a program to implement a menu which uses check-able items in Menu.

8. Write a program to implement a Custom Button and handle the displayed message on button press.

9. Write a program to implement the Table layout in View Group that displays child View elements in rows and columns.

10. Write a program to implement the List View in your android application.

11. Write a program to implement tween animation and rotate the text in your android application.

12. Write a sample program to create a progress bar for your android applications.

13. Write a program to show how to use Date picker control of ADK in your android applications.

14. Write a program which enables you to draw an image using bitmap class object.

15. Write a program which shows you how to handle any type of interruption in your android application.

16. Write a program which allows you to set an image as wallpaper.

17. Write a program which allows you to get image from web and displayed them using the Image View.

18. Write a program which shows you how to create a scroll view when text is not visible on one page.

19. Write a program which will shows you how to run any video file.