# BSc SYLLABUS

# Semester I

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS) :: TENALI**

**I B.Sc (MPComp & MCS) – I Semester**

**Paper-I:Computer Fundamentals and MS-Office**

**Syllabus**

**w.e.f 2015-16**

**Unit – I**

Introduction to Computers

Input and Out Put Devices

**Unit – II**

Computer Memory and Processors

Number Systems and Computer Codes

**Unit – III**

Computer Software

Operating Systems

Introduction to Algorithms and Programming Languages

**Unit – IV**

**MS Word:**

Getting Started.

Working with Microsoft Office 2007.

Understanding Word Basics. Editing and Formatting Text. Formatting Documents

Working with Graphic Objects.

**Microsoft Powerpoint:**

Understanding Powerpoint Basics. Formatting and Modifying Presentations. Enchancing the Presentation.

**Unit – V**

**Microsoft Excel:**

Understanding Excel Basics. Formatting and Editing the Worksheet. Using Formulas and Functions. Working with Charts.

**MS Access:** Basics of Database Table, form, Query

**TEXT BOOK:**

1. Fundamentals Of Computers " by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. **Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls UNIT IV,V.**

**REFERENCE BOOK:**

1. "Computer Fundamentals and Programming in C" by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. **PC SOFTWARE UNDER WINDOWS** by Puneet Kumar And Sushil Bhardwaj From Kalyani Publishers

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS) :: TENALI**

**I B.Sc (MPComp & MCS) – I Semester**

**Paper-I: Computer Fundamentals and MS-Office**

**Model Paper**

**w.e.f 2015-16**

**Time: 3 Hrs** **Max.Marks: 70M**

**Section – A**

**I. Answer any THREE of the following questions 3x15=45M**

1. Explain about input and output devices? (Unit I)
2. Explain about Secondary storage devices? (Unit II)
3. Define OS? Explain types of an Operating System? (Unit III)
4. Explain about formatting tools and techniques of MS-Word? (Unit IV)
5. Explain MS-Excel functions and formulas? (Unit V)

**Section –B**

**II. Answer any THREE of the following questions 3x5=15M**

6. Define computer? Explain characterstics of Computer? (Unit I)
7. Write a short notes on Number System? (Unit II)
8. Define Software? Explain types of Software? (Unit III)
9. Write down the steps to create a power point presentation? (Unit IV)
10. How to create a table in Ms-Access? (Unit V)

**Section –C**

**III. Answer ALL questions 5x2=10M**

11. List out the types of computers? (Unit I)
12. Differentiate between RAM and ROM **?** (Unit II)
13. Define Algorithm? (Unit III)
14. What are the Graphic objects in MS-Office? (Unit IV)
15. Define Query? (Unit V)

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS) :: TENALI**

**I B.Sc (MPComp & MCS) – I Semester**

**Paper-I:Computer Fundamentals and MS-Office**

**Practical's Model Paper**

**w.e.f 2015-16**

**Time: 3 Hrs** **Max.Marks: 50M**

1. Write a procedure to create a file and how to save it
2. Write a procedure to show your documentation in different views
3. Write a procedure to use formatting techniques in Ms-Word 2007
4. Write a procedure to create table in MS-word
5. Write a procedure to insert to pictures in Ms-word
6. Write a procedure to show power point presentation using transition
7. Write a procedure to show power point presentations using Animations
8. Demonistration on slide sorter view
9. Write a procedure to create chart in excel
10. Write a procedure to create a referencing cells
11. Write a procedure to demonistration on formulas
12. Write a procedure to create table using design view
13. Write a procedure to create query using design view
14. Write a procedure to create query using query wizard
15. Write a procedure to create form using form wizard

# Semester II

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS) :: TENALI**

**I B.Sc (MPComp & MCS) – II Semester**

**Paper II: C Programming**

**Syllabus**

**w.e.f 2015-16**

**Unit – I**

Chapter 1. Introduction to Algorithms and Programming Languages

Chapter 2. Introduction to C

**Unit – II**

Chapter 3. Decision Control and Looping Statements

Chapter 4. Functions

**Unit – III**

Chapter 5. Arrays

Chapter 6. Strings

**Unit – IV**

Chapter 7. Pointers

Chapter 8. Structure, Union, and Enumerated Data Types

**Unit – V**

Chapter 9. Files

**TEXT BOOK:**

1. E Balagurusamy: ―COMPUTING FUNDAMENTALS & C PROGRAMMING‖ – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.

2.“Computer Fundamentals and Programming in C” by REEMA THAREJA from OXFORD UNIVERSITY PRESS

3. C Programming by Dennis Riche

**REFERENCE BOOK:**


1. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
2. Henry Mullish & Huubert L.Cooper: The Sprit of C, Jaico Pub. House,1996.

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS) :: TENALI**

**I B.Sc (MPComp & MCS) – II Semester**

**Paper II: C Programming**

**Model Paper**

**w.e.f 2015-16**

**Time: 3 Hrs** **Max.Marks: 70M**

**Section – A**

**I. Answer any THREE of the following questions 3x15=45M**

1. Define Operator? Explain different types of operators in 'C'? (Unit I)
2. Explain Decision control and Looping statements with syntax and example? (Unit II)
3. What is an Array? How to declare and accessing the elements in Array with example? (Unit III)
4. Define Structure? Write a c program to enter student details using structure?(Unit IV)
5. Define file? Explain read data and write data functions of files with syntax and example? (Unit V)

**Section –B**

**II. Answer any THREE of the following questions 3x5=15M**

6. Explain about Generations of Programming Languages? (Unit I)
7. Explain about Storage classes? (Unit II)
8. Define String? Explain String functions? (Unit III)
9. What is Pointer? Write a program using pointers with arrays?(Unit IV)
10. Explain functions for selecting a Record Randomly?(Unit V)

**Section –C**

**III. Answer ALL questions 5x2=10M**

11. Define Algorithm?(Unit I)
12. What is Recursive Function?(Unit II)
13. Explain the purpose of strlen() function?(Unit III)
14. List out the Enumerated Datatypes?(Unit IV)
15. What is Command Line Arguments (Unit V)

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS) :: TENALI**

**I B.Sc (MPComp & MCS) – II Semester**

**Paper II:C Programming**

**Lab Cycle**

**w.e.f 2015-16**

**Time: 3 Hrs** **Max.Marks: 50M**

1. Demonstration on Decision Control Statements
2. Demonstration on 'switch' statement
3. Demonstration on 'for' Looping Statements
4. Demonstration on 'while' Looping Statements
5. Demonstration on 'do-while' Looping Statements
6. Demonstration on Functions
7. Demonstration on Recursive Functions
8. Demonstration on Arrays
9. Demonstration on Two Dimensional Arrays
10. Demonstration on Strings
11. Demonstration on Pointers
12. Demonstration on Structures
13. Demonstration on Unions
14. Demonstration on Enumerated Data types
15. Demonstration on Files

# Semester-III

## J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI

## SUBJECT: COMPUTER SCIENCE

## PAPER III: Object Oriented Programming with Java

## II B.Sc (MPComp,MCS) III SEMESTER SYLABUS

**Unit I:** **10hrs**

**Fundamentals of Object Oriented Programming**:

Object Oriented Paradigm, Basic concepts of OOPs, Benefits of OOPs, and Applications of oops,

**Java Evolution**: Java history, Java features, Java & Internet, Java & WWW, Web browsers, Hardware & Software sequences.

**Overview of Java Language**: Java fundamentals, Program structures, Character set, Key words, Identifiers, Java statements.

**Unit II:** **10hrs**

**Classes, Objects and Methods**: Class definition, creating objects, constructors, method over loading, static members and methods, nesting methods, Inheritance, overriding methods, final variable and methods, classes, abstract methods, classes, visibility modes.

**Arrays and strings**: One-dimensional and two-dimensional arrays, creating an array, strings arrays, **methods.**

**Unit III:** **10hrs**

**Interfaces**: Multiple Inheritances, Defining interfaces, extending interfaces, implementing interface, accessing interface variables, implementing multiple inheritance with the help of interface.

**Package**: Putting class together, Java API Packages, creating, using and accessing a package, adding a class to package, hiding classes.

**Multi-threaded programming**: Creating threads, extending the thread class, stopping and blocking a thread, life cycle of a thread.

**Unit IV:** **15hrs**

**Managing Errors and Exceptions:** Types of errors, Exceptions, syntax of exception handling code, multiple catch statements using finally statement.

**Managing Files:**

Stream classes, byte stream, character stream, creation of files, reading writing characters, reading writing bytes

**Unit V:** **15hrs**

**Applet Programming:**

Building applets, Applet life cycle, Executing applets, passing parameters to applet, displaying numerical values, getting input from user

**Graphics Programming:**

Graphics class, lines, rectangles, circles, ellipses, polygons, graphs

**JDBC:**

JDBC, basics of jdbc API

Servelets, Overview, interfacing with client, life cycle

## Unit wise weight age of marks:

| Unit | Essays(15M) (any three) | Short Aswers(5M) (any three) | Very short Ansewers(2M)(all) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed Book:**

E. Balaguruswamy; Programming with Java a primer; Tata Mc Graw Hill Publications II Edition

**Reference book:**

The complete reference Java2 – fifth edition

# Semester-IV

## J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI

## SUBJECT: COMPUTER SCIENCE

## PAPER IV: DATA BASE MANAGEMENT SYSTEM

## II B.Sc (MPComp,MCS) IV SEMESTER SYLABUS

**UNIT-I**

THE DATABASE ENVIRONMENT

Introduction-basic concepts and definitions-traditional file processing system-the database approach-the range of database applications-advantages of database approach-costs and risks of the database approach-components of the database environment-evolution of database systems.

**UNIT-II**

DATABASE DEVELOPMENT PROCESS

Introduction-database development with in information systems development-

Database development process-three-schema architecture for database development-three-

Tiered database location architecture.

**UNIT-III**

MODELING DATA IN THE ORGANIZATION

Introduction-modeling the rules of the organization-the er-model entity-relationship

Model constructs-relationships.

THE ENHANCED E-R MODEL AND BUSINESS RULES

Introduction-representing super types and sub types-specifying constraints in super/sub

Type relationship-entity clustering.

**UNIT-IV**

LOGICAL DATABASE DESIGN AND THE RELARTIONAL MODEL

Introduction-the relational data model-integrity constraints-transforming eer diagrams

To relations.

NORMALIZATON

Introduction to normalization-the basic normal forms-first normal form-second normal form-third normal form-merging relations- Advanced Normal forms.

**UNIT-V**

SQL

Introduction-history of the sql standard-the role of sql in a database architecture-the sql environment-defining a database in sql-inserting,updating and deleting data-internal schema definitions in rdbms-processing single tables.

## Unit wise weight age of marks:

| Unit | Essays(15M) (any three) | Short Aswers(5M) (any three) | Very short Ansewers(2M)(all) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed text books**:

Modern Database Management –JEFFREY A.HOFFER,MARY B.PRESCOTTFRED R.Mc FADDEN 6$^{TH}$ Edition

**Reference books:**

1.SQL/PL SQL The programming language of ORACLE-IVAN BAY ROSS

2.ORACLE-IVAN BAY ROSS

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**SUBJECT: COMPUTER SCIENCE**

**PAPER IV: DATA BASE MANAGEMENT SYSTEM**

**II B.Sc (MPComp,MCS) IV SEMESTER MODEL PAPER**

**Time: 3Hrs** **Max. Marks: 70M**

**I. Answer any three of the following** **3X15=45**

1. Explain about E-R Model?
2. Write about three- schema architecture?
3. Explain about first three normal forms?
4. Explain the Constraints in super class and sub class?
5. Write about DML Commands in SQL?

**II. Answer any three of the following** **3X5=15**

6. Explain about database architecture?
7. Write about referential integrity?
8. Create an Employee table and find the employee who earns highest salary?
9. Write about entity Clustering?
10. What are advantages of DBMS?

**III. Answer all of the fallowing** **5X2=10**

11. What is super type and sub type?
12. Explain the roles of DBA?
13. What is Database?
14. What is the difference between varchar and varchar?
15. What is transforming?

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**SUBJECT: COMPUTER SCIENCE**

**PAPER IV: DATA BASE MANAGEMENT SYSTEM**

**II B.Sc (MPComp,MCS) IV SEMESTER PRACTICAL LAB CYCLE**

Time: 3 Hrs Max. Marks:50m

1. Creation of tables
2. Insert the records into the table
3. Delete the records from the table
4. Modifying the records on the table
5. Drop the table
6. Get all the tables list from the database
7. Create the queries
8. Create the queries from the dual table
9. Nested queries
10. Demonstration on different clauses
11. Usage of different functions

# Semester-V

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER V: WEB TECHNOLOGIES**
**III B. SC (MPCOMP, MCS, MEC) V SEMESTER SYLLABUS**

**Unit I**
**HTML Basics**
**Introduction:** HTML, XML, and the World Wide Web.
**HTML:** Basic HTML, The Document body, Text, Hyperlinks, Adding more formatting, Lists, Tables, Using colors and images, Images.

**Unit II**

**More HTML:** Multimedia objects, Frames, Forms-towards interactivity, The HTML document Head in detail, XHTML- An evolutionary markup.
**Cascading Style Sheets:** Introduction, Using styles: Simple examples, Defining your own styles, Properties and values in styles, Style sheets- A worked example, Formatting blocks of information, Layers.

**Unit III**

**An introduction to Java Script:** What is dynamic html, Java Script, Javascript—The basics, Variables, String manipulation, Mathematical functions, Statements, Operators, Arrays, Functions.

**Unit IV**

**Objects in Java Script:** Data and objects in java script, Regular expressions, Exception Handling, Built in objects, Events.

**Unit V**
**Dynamic HTML with Java Script:** Data validation, Opening a new window, Messages and Confirmations, The status bar, writing to a different frame, Rollover buttons, Moving images, multiple pages in a single download, A text-only menu system, Floating logos.

**Unit wise Weight age of marks:**

| Unit | Essays(15M) | Short Answers(5M) | Very Short Answers(2M) |
|---|---|---|---|
| | Internal Choice | | |
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed Book:**

Chris Bates, Web Programming Building Internet Applications, Second Edition, Wiley (2007)

**Reference Books:**

1. Paul S.Wang Sanda S. Katila, An Introduction to Web Design Plus Programming, Thomson(2007).
2. Robert W.Sebesta, Programming the World Wide Web, Third Edition, Pearson Education (2007).
3. Thomas A.Powell, The Complete Reference HTML & XHTML, Fourth Edition, Tata McGraw Hill (2006).
4. Abders Moller and Michael Schwartzbach, An Introduction to XML and Web Technologies, Addison Wesley (2006).
5. Joel Sklar, Principles of Web Design, Thomson (2007).
6. Raj Kamal, Internet and Web Technologies, Tata McGraw Hill (2007).
7. Deitel, et al.,Internet and World Wide Web: How to Program, 3rd Edition, PHI (2008).
8. Gopalan & Akilandeswari, Web Technology: A Developer's Perspective, PHI (2008).

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**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER V: WEB TECHNOLOGIES**
**III B. SC (MP. COMP, MCS, MEC) V SEMESTER MODEL PAPER**

**Time: 3Hrs** **Max. Marks: 70M**

**I. Answer any three of the following: 3X15=45M**

1. Explain the features of a HTML program. Also, explain the structure of a HTML program.
2. What is the purpose of creating cascading style sheets? Explain the types of cascading style Sheets.
3. List out the various operators available in Java Script with suitable examples.
4. Explain in detail Built in objects in Java script.
5. Create a simple form and write a script that performs primitive checking of data.

**II Answer any three of the following: 3X5=15M**

6. Write about hyperlinks.
7. What are forms?
8. What is an array? Discuss the structure of an array with an example. Also, explain how an array element can be removed.
9. Write about exceptional handling.
10. Write about data validation in DHTML.

**I. Answer all the following: 5X2=10M**

11. Distinguish between Internet and intranet.
12. What is domain name?
13. What do you mean by home page?
14. What are class selectors?
15. What are clickable images?

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER V : WEB TECHNOLOGIES**
**III B. SC (MP. COMP, MCS, MEC) V SEMESTER LAB CYCLE**

1. Write a HTML program illustrating text formatting.
2. Illustrate font variations in your HTML code.
3. Prepare a sample code to illustrate links between different sections of the page.
4. Create a simple HTML program to illustrate three types of lists.
5. Embed a real player in your web page.
6. Embed a calendar object in your web page.
7. Create an applet that accepts two numbers and perform all the arithmetic operations on them.
8. Create nested table to store your curriculum.
9. Create a form that accepts the information from the subscriber of a mailing system.
10. Write a Java Script to accept the first, middle and last names of the user and print the name.
11. Evaluate the following:
    a) "10"+"90"
    b) (10<8)>10:8
    c) J=(i++)+(--i)+(++i)+(i++) where i=2
12. Write a script to find the factorial of a given number using functions.
13. Write a script to print all primes with in the given range.
14. Write a program to sort the array elements using "Bubble Sort" technique.
15. Write a program in Java Script to implement "Binary Search" technique.

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VI.I: OPERATING SYSTEMS CONCEPTS**
**III B.SC (MPCOMP, MCS, MEC) V SEMESTER SYLLABUS**

**Unit 1**
**OS Fundamentals and Structure of OS**
Introduction – What Operating Systems do – Computer – system organization Computer System Architecture – Operating Systems structure – Operating System operations : Process management - Memory management, storage management, Protection and security – Distributed systems – Computing environments.
**System structures** – Operating System services – User Operating System interface – system calls – Types of system calls – system programs – Operating system structure – system Boot.

**Unit 2**
**Process concept** – Process scheduling – Operations on processes – Inter process communication Examples of IPC systems – Communication in Client server systems. Multithreading and Process Synchronization.
**Multithreaded programming** – Multithreading models –Thread Libraries – Threading issues – Operating System examples. Process Scheduling –Basic concepts – Scheduling Criteria – Scheduling Algorithms – Multiple process scheduling – Thread scheduling .

**Unit 3**
**Process Synchronization** – The Critical section problem – Peter's solution –Synchronization Hardware – Semaphores – Classic problems of Synchronization– Monitors – Synchronization examples.
**Deadlocks** – System model – Deadlock Characterization – Methods for Handling Deadlocks – Deadlock prevention –Deadlock Avoidance – Deadlock Detection – Recovery from Deadlock.

**Unit 4**
**Memory Management Strategies.**
Memory – management strategies – swapping – contiguous Memory allocation –paging – structure of the page table – Segmentation. Virtual – Memory management – Demand paying – Page Replacement. File system – File concept –Access Methods – Directory structure – Protection.

**Unit 5**
**File Systems and I/O Management.**
Implementing file systems –File system structure -File system implementation– Directory implementation – Allocation methods – Free space management –Efficiency and Performance – Recovery.

**Unit wise Weight age of marks:**

| Unit | Essays(15M) | Short Answers(5M) | Very Short Answers(2M) |
|---|---|---|---|
| | Internal Choice | | |
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed Book:**

Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles, Seventh Edition, Wiley India Edition (2007) Chapters (1 to 11)

**Reference Books:**

1. William Stallings, Operating Systems Internals and Design Principles, Fifth Edition, Pearson Education (2007).
2. Andrew S Tanenbaum, Modern Operating Systems, 2nd Edition, Pearson Education.
3. Archer Harris J, Operating Systems, Schaum outline series, Tata McGraw Hill(2006).
4. Davis and Rajkumar, Operating Systems A Systematic view, Sixth Edition, Pearson Education (2007).
5. Bhatt, Introduction to Operating Systems: Concepts and Practice, 2nd Edition, PHI (2008).
6. Stallings, Operating Systems - Internals and Design Principles, 5th Edition, PHI (2007).

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VI.I: OPERATING SYSTEMS CONCEPTS**
**III B.SC (MP.COMP, MCS, MEC) V SEMESTER MODEL PAPER**

**Time: 3Hrs** **MaxMarks: 70M**

**I. Answer any three of the following:** **3X15=45M**

1. What is a system call? Different types of system calls?
2. Discuss any two scheduling algorithms in detail.
3. What is a deadlock? Explain different dead lock prevention measures?
4. Explain the FIFO page replacement algorithm?
5. Explain about file system structure?

**II. Answer any three of the following:** **3X5=15M**

6. Discuss about storage structure?
7. Define a process. Explain the different ways of scheduling Processes.
8. Write about monitors.
9. Explain segmentation.
10. Write about free space management.

**III. Answer all the following:** **5X2=10M**

11. Mainframe systems?
12. Context switch?
13. Paging?
14. Segmentation?
15. File attributes?

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS): TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VI.II: COMPUTER ORGANIZATION**
**III BSc (MPComp, MCS, MEC) V semester Syllabus**

**Unit I:**
**Digital logic circuits**
- Digital computers
- Logic gates
- Boolean algebra
- Combination circuits
- Flip flops

**Unit II:**
**Data representation**
- Data types
- Complements
- Error detection code

**Unit III:**
**Basic computer organization and design**
- Instruction codes
- Computer registers
- Computer instructions

**Unit IV:**
**Central Processing Unit**
- Stack Organization
- Instruction formats
- Addressing modes

**Unit V:**
**Memory organization**
- Main memory
- Auxiliary memory
- Associative memory
- Cache memory
- Virtual memory

**Unit wise Weight age of marks:**

| Unit | Essays(15M) (Any three) | Short Answers(5M) (Any three) | Very Short Answers(2M) (All) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed books:**

Computer System Architecture -Morris mano

**Reference Books:**

Digital logic and Computer design -Morris Mano,Tata Mc Graw Hill Publications

Structured Computer Organization, -Andrew S. Tenenbaum,Tata Mc Graw Hill Publications

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS): TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VI.II: COMPUTER ORGANIZATION**
**IIIBSC (MPCOMP, MCS, MEC) V SEMESTER MODEL PAPER**

**Time:3 Hours** **Max.Marks:70M**

**I. Answer any Three of the following.** **3X15=45M**

1. Explain any four flip-flops with truth table?
2. Explain about complements with examples?
3. Explain computer registers?
4. Explain about addressing modes?
5. Explain the differences between main memory and Auxiliary memory?

**II. Answer any Three of the following.** **3X5=15M**

6. What are the logic gates with truth tables?
7. Explain Datatypes?
8. Define instruction code?
9. Explain Stack Organization?
10. Explain associative memory?

**III. Answer All the following.** **5X2=10M**

11. What is computer organization?
12. Define Compliments?
13. Define Accumulator?
14. Define Instruction format?
15. Define Virtual memory?

# Semester-VI

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VII.I: C#.net**
**III B.SC (COMP & MCS) VI SEMESTER SYLLABUS**

**Unit: I**

**C# And.Net Frame Work**

- The .net platform
- The .net frame work
- Compilation and MSIL
- The c# language

**C# language fundamentals**

- Data types
- Variables & consonants
- Statements->conditional & control statements
- Operators
- Classes, methods-> overriding, overridable

**Unit: II**

**Handling Exceptions**

- Throwing and catching exceptions
- Exception objects
- Custom exceptions
- Re-throwing exceptions

**Unit: III**

**Programming with C#**

- Building windows application
- Creating a windows form applications
- Displaying an application

**Unit: IV**

**Accessing data with Ado.net**

- Relational database and SQL
- The ado.net object model
- Using oledb managed providers
- Working with data bound controls
- Changing data base records

**Unit: V**

**Programming web applications with web forms**

- Understanding web form
- Creating a web form
- Adding controls
- Data binding
- Responding to post back event

**Unit wise Weight age of marks:**

| Unit | Essays(15M) (Any three) | Short Answers(5M) (Any three) | Very Short Answers(2M) (All) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed Book:**

Programming with C# - O'relly

**Reference Books:**

Programming in C# -E.Balagurusamy,

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VII.I: C#.net**
**III B.SC (COMP & MCS) VI SEMESTER MODEL PAPER**

**Time: 3hrs** **Max marks: 70M**

**I. Answer any three of the following** **3X15=45M**

1) Draw a flow chart of .NET FRAME WORK and explain?
2) Explain about class, inheritance, constructors, and destructors?
3) What is meant by Name space? Write any 10 Name space classes that we use in C#?
4) Explain about data bound controls?
5) Explain data binding?

**II. Answer any three of the following** **3X5=15M**

6) Explain about Exception handling?
7) Write about Ado.Net Object Model?
8) Define Adding Controls?
9) What is value type & reference type? Give an example?
10) How to create a web form? Explain?

**III. Answer all the following** **2X5=10M**

11) What is Exception? Define with example?
12) What is post back?
13) Define OLEDB?
14) What is relational database?
15) What is Response.redirect?

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VII.I: C#.net**
**III B.SC (COMP &MCS) VI SEMISTER LAB CYCLE**

**MAX.MARKS:50**

1. Demonstration on combo box.
2. Demonstration on constructor.
3. Demonstration on Dataset.
4. Demonstration on directory.
5. Demonstration on context menu strip.
6. Demonstration on enumerated data types.
7. Demonstration on exception handling.
8. Demonstration on focus related events.
9. Demonstration on animated text (GDI).
10. Demonstration on interface.
11. Demonstration on list box.
12. Demonstration on mouse down events.
13. Demonstration on navigation the records.
14. Demonstration on note pad.
15. Demonstration on create table in oracle.
16. Demonstration on display records one by one from table.
17. Demonstration on developing dynamic from using oracle.
18. Demonstration on insert the data into table.
19. Demonstration on window explorer.
20. Demonstration on create Screensaver.

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VII.II: INTERNET PROGRAMMING**
**III B.SC (COMP &MCS) VI SEMISTER SYLLABUS**

**UNIT I**

Users of Internet:Internet –What can be done on internet?

Putting business on the internet-standard internet components-world wide web-viewing internet channels-emails

**UNIT II**

ASP AND XML:

Active server pages and java:active server pages,java

**UNIT III**

XML: define data for web application:basic XML,document type definition,XMLschema,document object model,presenting

XML

Good design:structure,tables versus frames,accessibility,internationalization,exercises.

**UNIT IV**

Web based software's and protocols.

Useful software:web browsers,perl,web servers,mod-perl,databases,accessing your ISP,exercises

**Unit V**

Web based protocols.

Protocols:protocols,IP and TCP,hyper text transfer protocol,common

Gateway interface,the document object model,introduction the document object model,

Exercises

**Unit wise Weight age of marks:**

| Unit | Essays(15M) (Any three) | Short Answers(5M) (Any three) | Very Short Answers(2M) (All) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |

| | | | |
|---|---|---|---|
| V | 1 | 1 | 1 |

PRESCRIBED BOOK:

Chris bates,web programming building internet application,second edition,wiley(2007)

REFERENCE BOOKS:

1.Paul S.Wang Sanda S.Katila,An introduction to web design plus programming,Thomson(2007).

2.Robert W.Sebesta,programming the world wide web,Third edition person education(2007).

3.Thomas A.Powell,the complete reference HTML&XHTML,Fourth edition,tata McGraw Hill(2006).

4.Abdres Moller and Michael Schwartzbach,An Introduction to XML and web technologies,Addition Wesley(2006).

5.Joel Sklar,principales of web design,Thomson(2007).

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VII.II: INTERNET PROGRAMMING**
**III B.SC (COMP &MCS) VI SEMISTER MODEL PAPER**

**Time: 3Hrs** **MaxMarks: 70M**

**I. Answer any three of the following:** **3X15=45M**

1. Explain about standard internet components.
2. Write about ASP objects?
3. Explain about XML schema?
4. Explain web servers?
5. Explain about protocols/

**II. Answer any three of the following:** **3X5=15M**

6. Write about world wide web?
7. Write about ASP?
8. Write about good design structure?
9. Explain about databases?
10. Write about document object model?

**III. Answer all of the following:** **5X2=10M**

11. Define email?
12. Define ASP?
13. Define CSS?
14. Define IP and TCP?
15. Define Web server?

**JMJ COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VII.II: INTERNET PROGRAMMING**
**III B.SC (COMP &MCS) VI SEMISTER LAB CYCLE**

1. Create a web page for a shopping mall that allows the user to tick off his purchases and obtain a bill with the total being simultaneously added up.
2. Design a simple calculator
3. Write an ASP script to update the student information with some number 'n' in the table
4. Delete the desired student 's rec ord from the table using the ASP script
5. Write an ASP script to send the information accepted from the user and send it to a CGI script
6. Illustrate the procedure of creating user-defined classes
7. Illustrate the creation of embedded style sheet
8. Create an external style sheet for creating a font family
9. Creating an inline style sheet for your web page
10. Create a bio-data format of the student
11. Write a script for the various validations
12. Write an ASP script to print all the perfect numbers
13. Write an ASP script to print all the perfect numbers
14. Write an ASP script to perform stack operations
15. Write an ASP script to sort the array elements using bubble sort

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VIII.I: COMPUTER NETWORKS**
**III B.SC (COMP & MCS) VI SEMESTER SYLLABUS**

**UNIT-I:**

**Introduction**

- Data Communication
- Networks
- Protocols and Standards
- Standards Organizations

**Basic Concepts**

- Line Configuration
- Topology
- Transmission mode
- Categories of networks

**UNIT-II:**

**The OSI Model**

- Functions of the layers

**Signals**

- Analog & Digital
- Periodic Signals & Aperiodic Signals
- Analog Signals
- Digital Signals

**UNIT-III:**

**Transmission Media**

- Guided media
- Unguided media

**Multiplexing**

- FDM
- TDM

**UNIT-IV:**

**Local Area Networks**

- Ethernet
- Token bus
- Token ring
- FDDI

**Switching**

- Circuit Switching
- Packet Switching
- Message Switching

**UNIT-V:**

**Networking & Internetworking Devices**

- Repeaters
- Bridges
- Routers

Gateways
Routing Algorithms

**Unit wise Weight age of marks:**

| Unit | Essays(15M) (Any three) | Short Answers(5M) (Any three) | Very Short Answers(2M) (All) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed Books:**

Data Communications and Networking 2nd edition- Behrouz A.Forouzan

**Reference Books:**

Computer Networks- 3rd Edition- Andrew S.Tanenbaum

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VIII.I: COMPUTER NETWORKS**
**III B.SC (COMP & MCS) VI SEMESTER MODEL PAPER**

**Time: 3Hrs** **MaxMarks: 70M**

**I. Answer any three of the following: 3X15=45M**

1. Explain about Network Topologies
2. What are the functions of OSI layer
3. Write about guided media
4. Explain Ethernet
5. Explain about Bridges

**II. Answer any three of the following: 3X5=15M**

6. What are the advantages of distributed processing
7. Write a short notes on Digital Signals
8. Write a short notes on Time Division Multiplexing
9. Write about Message Switching
10. Explain about gateways

**III. Answer all of the following: 5X2=10M**

11. What is the purpose of ANSI
12. What is Amplitude & Frequency
13. What is guard band
14. What is meant by FDDI
15. Define Routing Algorithm

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VIII.II: COMPUTER GRAPHICS**
**III B.SC (COMP & MCS) VI SEMESTER SYLLABUS**

**UNIT-I:**

**A survey of Computer Graphics**

- Computer Aided Design
- Presentation Graphics
- Computer Art
- Entertainment
- Education & Training
- Visualization
- Image Processing
- Graphical User Interfaces
- Input Devices
- Hard- copy Devices

**UNIT-II:**

**Overview of Graphics Systems**

- Video Display Devices
- Refresh CRT
- Raster- Scan Displays
- Random- Scan Displays
- Color CRT Monitors
- Direct View Storage Tubes
- Flat Panel Displays
- 3D Viewing Devices: Stereoscopic views
- Raster- Scan Systems
- Random- Scan Systems

**UNIT-III:**

**Attributes of Output Primitives**

- Line Attributes
  - Line Type
  - Line Width
- Curve Attributes
- Character Attributes
  - Text Attributes
  - Marker Attributes

**UNIT-IV:**

**GUI & Interactive input methods**

- User Dialogue
- Input of Graphical Data
- Logical Classification of input devices
  - Locator Devices
  - Stroke Devices
  - String Devices
  - Valuator Devices
  - Choices Devices

Pick Devices

**UNIT-V:**

**Input Functions**

Input mode
Request mode
Locator & Stroke input in request mode
String input in request mode
Valuator input in request mode
Choice input in request mode
Pick input in request mode
Sample mode
Event mode

**Unit wise Weight age of marks:**

| Unit | Essays(15M) (Any three) | Short Answers(5M) (Any three) | Very Short Answers(2M) (All) |
|---|---|---|---|
| I | 1 | 1 | 1 |
| II | 1 | 1 | 1 |
| III | 1 | 1 | 1 |
| IV | 1 | 1 | 1 |
| V | 1 | 1 | 1 |

**Prescribed Books:**

Computer Graphics- Donald Hearn, Pauline Baker

**Reference Books:**

Computer Graphics Principles & Practices – Foley, Vandam, Feiner, Hughes

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**
**SUBJECT: COMPUTER SCIENCE**
**PAPER VIII.II: COMPUTER GRAPHICS**
**III B.SC (COMP & MCS) VI SEMESTER SYLLABUS**

**Time: 3 Hrs** **MaxMarks: 70 M**

**I. Answer any three of the following: 3X15=45M**

1. Explain about input devices
2. Explain about video display devices
3. Write about line attributes
4. Write about input of graphical data
5. What are the modes available in input functions

**II. Answer any three of the following: 3X5=15M**

6. Write a short notes on GUI
7. Explain Raster Scan System
8. Write about curve attributes
9. Write about User dialogue
10. Write a short notes on event mode

**III. Answer all of the following: 5X2=10M**

11. What is morphing
12. What is meant by CRT
13. What is marker symbol
14. What is image processing
15. Define sample mode

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**GENERAL ELECTIVE**

**WEB DESIGNING**

**SYLLABUS**

**UNIT 1**

**HTML Basics**

**Introduction**: HTML, XML, and the World Wide Web.

**HTML**: Basic HTML, The Document body, text ,hyperlinks ,adding more formatting, lists, Tables ,using colors and images ,images.

**UNIT 2**

**More HTML** : Multimedia objects ,frames ,forms-towards interactivity ,The HTML document head in detail ,XHTML-an evolutionary markup.

**Cascading style sheets**: Introduction, Using styles: Simple examples, Defining your own styles, properties and values in styles, Styles sheets-A worked example, Formatting blocks of information ,Layers.

**UNIT 3**

**An introduction to java script**: what is dynamic html, java script, javascript- the basics, variables, string manipulation, mathematical functions, statements, operators, arrays, functions.

**UNIT 4**

**Objects in java script**: data and objects in java script, regular expressions, exception handling, built in objects, events.

**UNIT 5**

**Dynamic HTML with java script**: data validation, opening a new window, messages and confirmations, the status bar, writing to a different frame, rollover buttons, moving images, multiple pages in a single download, A text-only menu system, floating logos.

**Prescribed Book:**

Chris bates, web programming building internet applications, second edition, wiley (2007)

**Reference books:**

1. Paul S. Wang Sanda S. Katila, An introduction to web design plus programming, Thomson (2007)

2. Robert w. Sebesta, Programming the world wide web, third edition, Pearson education (2007).
3. Thomas A. powell, the complete reference HTML & XHTML, fourth edition, Tata McGraw Hill(2006).
4. Abders Moller and Michael schwartzbach, An introduction to XML and web technologies, Addison Wesley(2006).
5. Joel sklar, principles of web design, Thomson(2007).

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**GENERAL ELECTIVE**

**WEB DESIGNING**

**MODEL PAPER**

**Time: 3Hrs** **Max. Marks: 70 M**

**I. Answer any three of the following:** **3 X 15 = 45 M**

1. Explain different lists in html with example.
2. Explain the types of cascading style sheets with examples.
3. List out the various operators available in Java script with suitable examples.
4. Explain in detail the built in objects in Java script.
5. Explain data validation.

**II. Answer any three of the following:** **3 X 5 =15 M**

6. Explain the structure of a HMTL program.
7. What are forms? Create a form your college web site.
8. What is an array? Discuss the structure of an array with an example.
9. Write about exceptional handling.
10. Write about rollover buttons in DHTML.

**III. Answer all the following:** **5 X 2 = 10 M**

11. What is world wide web?
12. What is domain name?
13. What do you mean by hyperlinks?
14. What are class selectors?
15. What are clickable images?

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**GENERAL ELECTIVE**

**WEB DESIGNING**

**LAB CYCLE**

**30M**

1. Write a HMTL program illustrating text formatting.
2. Illustrate font variations in your HMTL code.
3. Prepare a sample code to illustrate links between different sections of the page.
4. Create a simple HMTL program to illustrate three types of lists.
5. Embed a real player in your web page.
6. Embed a calendar object in your web page.
7. Create an applet that accepts two numbers and perform all the arithmetic operators on them.
8. Create nested table to store your curriculum.
9. Create a form that accepts the information from the subscriber of a mailing system.
10. Write a Java script to accept the first, middle and last names of the user and print the name.
11. Evaluate the following:
    a) ”10”+”90”
    b) (10<8)>10:8
    c)J=(i++)+(--i)+(++i)+(i++)where i=2
12. Write a script to find the factorial of a given number using functions.
13. Write a script to print all primes within the given range.
14. Write a program to sort the array elements using”Bubble Sort” technique.
15. Write a program in Java script to implements “Binary Search”technique.

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**GENERAL ELECTIVE**

**COMPUTER FUNDAMENTALS AND MS-OFFICE**

**SYLLABUS**

**Unit – I**

Introduction to Computers

Input and Out Put Devices

**Unit – II**

Computer Memory and Processors

Number Systems and Computer Codes

**Unit – III**

Computer Software

Operating Systems

Introduction to Algorithms and Programming Languages

**Unit – IV**

**MS Word:**

Getting Started.

Working with Microsoft Office 2007.

Understanding Word Basics. Editing and Formatting Text. Formatting Documents

Working with Graphic Objects.

**Microsoft Powerpoint:**

Understanding Powerpoint Basics. Formatting and Modifying Presentations. Enchancing the Presentation.

**Unit – V**

**Microsoft Excel:**

Understanding Excel Basics. Formatting and Editing the Worksheet. Using Formulas and Functions. Working with Charts.

**MS Access:** Basics of Database Table, form, Query

**TEXT BOOK:**

1. Fundamentals Of Computers ” by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. **Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls UNIT IV,V.**

**REFERENCE BOOK:**

3. “Computer Fundamentals and Programming in C” by REEMA THAREJA from OXFORD UNIVERSITY PRESS
4. **PC SOFTWARE UNDER WINDOWS** by Puneet Kumar And Sushil Bhardwaj From Kalyani Publishers

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**GENERAL ELECTIVE**

**COMPUTER FUNDAMENTALS AND MS-OFFICE**

**MODEL QUESTION PAPER**

**Time: 3 Hrs** **Max.Marks: 70M**

**Section – A**

**I.Answer any THREE of the following questions 3x15=45M**

1. Explain about input and output devices? (Unit I)
2. Explain about Secondary storage devices? (Unit II)
3. Define OS? Explain types of an Operating System? (Unit III)
4. Explain about formatting tools and techniques of MS-Word? (Unit IV)
5. Explain MS-Excel functions and formulas? (Unit V)

**Section –B**

**II.Answer any THREE of the following questions 3x5=15M**

6. Define computer? Explain characterstics of Computer? (Unit I)
7. Write a short notes on Number System? (Unit II)
8. Define Software? Explain types of Software? (Unit III)
9. Write down the steps to create a power point presentation? (Unit IV)
10. How to create a table in Ms-Access? (Unit V)

**Section –C**

**III.Answer ALL questions 5x2=10M**

11. List out the types of computers? (Unit I)
12. Differentiate between RAM and ROM **?** (Unit II)
13. Define Algorithm? (Unit III)
14. What are the Graphic objects in MS-Office? (Unit IV)
15. Define Query? (Unit V)

**J.M.J COLLEGE FOR WOMEN (AUTONOMOUS), TENALI**

**GENERAL ELECTIVE**

**COMPUTER FUNDAMENTALS AND MS-OFFICE**

**LAB CYCLE**

**Max.Marks: 30M**

1. Write a procedure to create a file and how to save it
2. Write a procedure to show your documentation in different views
3. Write a procedure to use formatting techniques in Ms-Word 2007
4. Write a procedure to create table in MS-word
5. Write a procedure to insert to pictures in Ms-word
6. Write a procedure to show power point presentation using transition
7. Write a procedure to show power point presentations using Animations
8. Demonistration on slide sorter view
9. Write a procedure to create chart in excel
10. Write a procedure to create a referencing cells
11. Write a procedure to demonistration on formulas
12. Write a procedure to create table using design view
13. Write a procedure to create query using design view
14. Write a procedure to create query using query wizard
15. Write a procedure to create form using form wizard