

**DEPARTMENT OF  
INFORMATION TECHNOLOGY  
U.G. PROGRAMME**

**SYLLABUS**

**2016 – 2019 BATCH**

**V SEMESTER**



**A. D. M. COLLEGE FOR WOMEN  
NAGAPATTINAM**

**SEMESTER VI**  
**CORE COURSE XIII**  
**COMPUTER GRAPHICS AND MULTIMEDIA**

<b>Internal Marks : 25</b>	<b>Instruction Hrs : 6</b>
<b>External Marks : 75</b>	<b>Credit : 6</b>
<b>Total Marks : 100</b>	<b>Exam Hrs : 3</b>

**Objective**

To impart the basic principles of generating primitives, shapes, package development, interactive graphics, raster graphics, two and three dimensional graphics and their transformations.

**UNIT I**

Introduction: Overview of Graphics Systems - Video Display Devices - Refresh Cathode Ray Tubes - Raster Scan and Random Scan Displays - Raster Scan and Random Scan Display Processor - Colour CRT Monitors – DVST - 3D Viewing Devices - Input Devices - Hard Copy Devices.

**UNIT II**

Output primitives: Line drawing algorithms - DDA Line drawing algorithm - Bresenham's line drawing algorithm - Circle Drawing algorithms - Bresenham's circle drawing algorithm - Mid point circle drawing Algorithms - Area filling algorithms – Scan line algorithm – boundary fill algorithm – flood fill algorithm - character generation

**UNIT III**

Attributes of Output primitives: line attributes – Curve attributes - Area fill attributes - Character attributes - bundled attributes - Anti aliasing techniques - 2D Transformations – Basic transformation – Composite transformation – other transformation

**UNIT IV**

2D viewing: windowing concepts – clipping algorithms- window to viewport transformation - Graphical User interfaces - logical classification of input devices - Interactive Input Methods - Three dimensional display techniques

## **UNIT V**

Multimedia hardware & software - Components of multimedia – Text – Image – Graphics – Audio – Video - Animation - Multimedia communication systems – Applications: Video conferencing - Virtual reality - Interactive video - video on demand

## **TEXT BOOKS**

1. Donald Hearn and M. Pauline Baker, Computer Graphics , 3rd Edition, Prentice Hall of India.
2. Ralf Steinmetz, Klara Steinmetz, "Multimedia Computing, Communications and Applications", Pearson education.

## **REFERENCES**

1. Steven Harrington, Computer Graphics Programming Approach , 2nd Edition McGraw Hill.
2. Roy A. Plastock and Gordon Kelley, Theory and Problems of Computer Graphics, Schaum's Outline Series, McGraw Hill.

**SEMESTER VI**  
**CORE COURSE XIV**  
**.NET TECHNOLOGY**

**Internal Marks : 25**  
**External Marks : 75**  
**Total Marks : 100**

**Instruction Hrs : 6**  
**Credit : 6**  
**Exam Hrs : 3**

**Objective**

To understand the concepts of .NET technology

**UNIT I**

Introduction: Integrated Development Environment - IDE Components -Setting Environment Options - Building a Console application -Variable-Variable as Objects - Constants-Arrays.

**UNIT II**

Programming Fundamentals: Flow Control Statement-Writing & using procedures - Argument-Built-in Functions -The Textbox control -The List box, Checked List Box and Combo Box Controls-The Scrollbar or Track bar controls.

**UNIT III**

Working with Forms: Appearance of Forms - Loading or showing Forms - Dynamic Forms -Designing Menus - Common Dialog controls - Rich Text box Control – List view, Tree view, or Image List Controls - Handling Strings or Characters - Handling Dates or Times - Manipulating Folders or Files -Accessing Files.

**UNIT IV**

ADO .Net: The Basic Data - Access Classes-storing Data in datasets - Update Operations -Working with Typed Datasets - Data Binding - Designing Data Driven Interfaces.

**UNIT V**

Building Web Applications: Understanding HTML or DHTML- working with HTML - Cascading Style Sheets - Server Side Technologies – Controls - ASP.Net Objects - Understanding Web Services.

**TEXT BOOK**

Evangelos Petroustos, *Mastering Microsoft Visual Basic 2008*, Wiley India Edition, Wiley Reprint, 2009.

**SEMESTER VI**  
**CORE COURSE XV**  
**SHELL PROGRAMMING LAB**

**Internal Marks : 40**

**Instruction Hrs : 5**

**External Marks : 60**

**Credit : 5**

**Total Marks : 100**

**Exam Hrs : 3**

1. Write a Shell program, which accepts the name of a file from the standard input and performs the following tests on it:
  - (i) File existence
  - (ii) File readable
  - (iii) File writeable
  - (iv) Both readable and writeable
  
2. Write a Shell program using three arguments to take the pattern as well as input and output file names. If the pattern is found display "Pattern found", else display "Error message". Also check if right number of arguments is entered.
  
3. Write a Shell program, which accepts the name of the file from the standard input and then performs the following tests on it:
  - (i) Enter five names in a file
  - (ii) Sort the names in existing file
  - (iii) List unsorted and sorted file
  - (iv) Quit
  
4. Write a menu driven Shell program to copy, edit, rename, and delete a file.

5. Write a menu driven Shell program to perform the following tasks
  - (i) Enter the sentence in file
  - (ii) Search a given whole word in an existing file
  - (iii) Quit
  
6. Write a Shell script to display the result "PASS" or "FAIL" using the information given below:

Student Name, Student Register Number, Mark1, Mark2, Mark3, Mark4. The minimum pass for each subject is 50.
  
7. Write a menu driven Shell script for converting all the capital letters in a file to small case letters and vice versa.
  
8. Write a Shell script to merge the contents of three given files, sort them and display the sorted output on the screen page by page.
  
9. Write a Shell script to check whether a given string is Palindrome or not.
  
10. Write a Shell script to find factorial of a given number.
  
11. Write a Shell program to prepare the electricity bill based on the following rules :

For first 100 units	-	Rs. 1.00/unit
For next 100 units	-	Rs. 2.00/unit
Above 200 units	-	Rs. 3.00/unit

**SEMESTER VI**  
**MAJOR BASED ELECTIVE II**  
**LINUX ADMINISTRATION**

**Internal Marks : 25**  
**External Marks : 75**  
**Total Marks : 100**

**Instruction Hrs : 6**  
**Credit : 5**  
**Exam Hrs : 3**

**Objectives**

To understand the concepts of Linux, its distribution, file system and administration.

**UNIT-I**

Introduction to Linux – Understanding Linux – Why use Linux – An Overview of Linux features – A brief History of Linux – Basic Features – Advantages of Using Linux Disadvantages of Using Linux – Installing Linux – Getting Started – Hardware – Understanding System Hardware - Understanding Peripheral Hardware – Choosing the Right Hardware for Linux.

**UNIT-II**

Understanding Linux Distributions – The Slack ware Packages - Installing Linux – What you need to install Linux – The Preparations – Preparing Floppies and Backups – Partitioning your Hard Drive – Preparing the Hard Drive for Linux – Installing the Linux System – Running Linux Applications – Maneuvering Through Linux – Managing Users – Basic Commands- Shutting Down Linux – Running Programs.

**UNIT-III**

Managing the File System – Understanding the File and directory Systems – Understanding File Names – Looking at Types of Files – Looking at Linux Standard Directories – Managing Files and Directories – Listing Files – Organizing Files – Copying Files – Moving and Renaming Files - Removing Files or Directories – Viewing the Content of a File – Searching for Files – Changing File Time and Date Stamps – Compressing Files – Manipulating Files with the GUI. The X-Windows system – What is X-Windows – Installing X-Free86 System – Configuring Xfree86 – Using X-Windows – X-Windows Applications.

## **UNIT-IV**

System Administration - Understanding System Administration – Looking at the Importance of Proper Administration – Understanding Multi-user Concepts – Understanding Centralized Processing Systems – Understanding Distributed Processing System – Understanding Client/Server Model – Administration in a Networked Environment – Defining the Role of the Network Administrator – Booting and Shutdown – Booting Linux – Shutting Down Linux – Managing User Accounts – Working with Users – Working with Groups – Backing Up Data – Planning Backup Schedule – Performing Backups and Restoring Files – Improving System Security – Physical Security – Password Security – Logon Security – File Security.

## **UNIT-V**

Networking Administration – Understanding the TCP/IP Protocol Suite – History of TCP/IP – Internet Terminology – Open Systems Interconnection Model – TCP/IP Protocol Stack – IP Addresses – Sub networks - Routing – Setting Up Internet Networks – Configuring TCP/IP Network – TCP/IP Configuration Files – Installing Ethernet Interfaces – TCP/IP Routing – Monitoring a TCP/IP Network netstat – Netconfig program – Configuring Domain Name Service – Introduction to DNS – The Resolver - The Named Daemon – The named.*hosts* File – The named.*rev* file – The named.*ca* File – Troubleshooting.

## **Text Book**

The Most Complete Reference – Special Edition Using LINUX.



**SEMESTER VI**  
**MAJOR BASED ELECTIVE III**  
**.NET TECHNOLOGY LAB**

**Internal Marks : 40**

**External Marks : 60**

**Total Marks : 100**

**Instruction Hrs : 6**

**Credit : 5**

**Exam Hrs : 3**

1. Placing Textboxes dealing with its properties.
2. Making use of placeholders, literals and controls.
3. Making use of list box, check box and radio button controls.
4. Setting up and using Ad Rotator control.
5. Making use of Required field Validator and Compare Validator controls.
6. Using Range Validator, Regular Expression Validator and validation summary.
7. Database connectivity through connected approach.
8. Data view with the help of grid view control.
9. Formatting data with a help of data list control.

**VI Semester****Part – V: GENDER STUDIES**

Internal Marks : 25

Instruction Hrs : 1

External Marks: 75

Credit : 1

Total Marks : 100

Exam Hrs : 3

**Objectives**

- ❖ To make boys and girls aware of each others strengths and weakness.
- ❖ To develop sensitivity towards both genders in order to lead an ethically enriched life.
- ❖ To promote attitudinal change towards a gender balanced ambience and women empowerment.

**Unit – I**

**Concepts of Gender** : Sex-Gender-Biological Determinism-Patriarchy-Feminism-Gender Discrimination-Gender Division of Labour –Gender Stereotyping-Gender Sensitivity-Gender Equity-Equality-Gender Mainstreaming-Empowerment.

**Unit – II**

**Women’s Studies Vs Gender Studies** : UGC’s Guidelines-VII to XI Plans-Gender Studies: Beijing Conference and CEDAW-Exclusiveness and Inclusiveness.

**Unit – III**

**Areas of Gender Discrimination** : Family - Sex Ratio – Literacy – Health – Governance -Religion Work Vs Employment – Market – Media – Politics – Law – Domestic Violence – Sexual Harassment – State Policies and Planning.

**Unit – IV**

**Women Development and Gender Empowerment** : Initiatives – International Women’s Decade – International women’s Year – National Policy for Empowerment of Women – women Empowerment Year 2001 – Mainstreaming Global Policies.

**Unit – V**

**Women’s Movements and Safeguarding Mechanism** : In India National / State Commission for Women (NCW) – All Women Police Station- Family Court – Domestic Violence Act – Prevention of Sexual Harassment at Work Place Supreme Court Guidelines – Maternity Benefit Act – PNDT Act – Hindu Succession Act 2005 – Eve Teasing Prevention Act – Self Help Groups – 73<sup>rd</sup> and 74<sup>th</sup> Amendment for PRIS.

## REFERENCES

- Bhasin Kamala, Understanding Gender : Gender Basics, New Delhi: women Unlimited, 2004
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- Bhasin Kamala, What is Patriarchy?: Gender Basics, New Delhi: women Unlimited, 1993
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- Agarwal Bina, Humphries Jane and Robeyns Ingrid (ed.,) Capabilities, Freedom, and Equality: Amartya Sen's Work from a Gender Perspective, New Delhi : Oxford University Press, 2006
- Rajadurai.S.V, Geetha.V. Themes in Caste Gender And Religion, Tiruchirappalli : Bharathidasan University, 2007
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- Krishna Sumi,(ed.,) Livelihood and Gender: Equity in Community Resource Management, New Delhi: Sage Publication, 2004
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- Mohanty Manoranjan(ed.,) Class, Caste, Gender: Readings in Indian Government and Politics- 5, New Delhi: Sage Publications, 2004.
- Arya Sadhna, Women, Gender Equality and the State, New Delhi: Deep & Deep Publications, 2000
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- Sexual Harassment at the workplace – A Guide, New Delhi; Sakshi, 1999.