I M.Sc (IT) / II Semester

JAVA and Web Designing

UNIT I

Introduction to java – Features of java – Classes – Objects – Constructors – Overloading method – Access control – Static and fixed methods –Inner Classes – String Class – Inheritance-Overriding methods – Using **this** and **super** keyword – Abstract Class- Packages- Important Packages – Interfaces- Exception Handling- Throw and Throws – Finally.

UNIT II

Thread –Synchronization – Messaging- Runnable Interface- Inter thread Communication- DeadLock- Suspending, Resuming and stopping threads- Multithreading-I/O Streams – File Streams- String Objects –String Buffer- Char Array-java Utilities.

UNIT III

Applets- Introduction- Skeleton- Simple Applets- Passing parameters –Event handling- Event classes – Event listener- Mouse events- Keyboard Events- Images-Graphics- Working with windows using AWT Classes- AWT Controls- Layout Managers and Menus.

UNIT IV

Introduction to HTML – Lists – Adding Graphics to HTML documents – Tables – Linking Documents – Frames.

UNIT V

Introduction to JS – Advantage of JS – JS Syntax – JS Data types – JS Variables- JS Operators and Expression - JS Functions-JS Conditional- JS Looping – JS

Dialog box.- JS Array. JavaScript document object model – Introduction – Object in HTML — Browser Object – Handling events using JS - Form Object – Form Object Methods - Build in Object – JS Date, JS Math, JS String - User defined Object – Cookies.

Reference books:

1. P.Naughton and H.Schildt - Java 2 (The complete reference)- IIIth Edition
2. Cary S.Horstman, Gary Cornell – Core java 2 Volume1 – Fundamentals, Vth Edition
3. K.Arnold and J.Gosling – The Java Programming Language – IIth Edition, Addison Wesley 1996
4. I.Bayross – Web Enable Commercial Application development Using HTML, DHTML, JavaScript, Perl, CGI – BPB Publications 2000

I M.Sc (IT) / II Semester

DATA MINING AND DATA WAREHOUSING

UNIT – I

Data Mining – Introduction – Functionalities – Classification of Data Mining System – Issues – Data Preprocessing – Data Cleaning – Data Integration and transformation – Data Reduction.

UNIT – II

Data Mining Primitives – Query Language Architecture of Data Mining system – Data Generalization and Summarization based Characterization – Analytical Characterization – Mining Class Comparisons.

UNIT – III

Association Rule Mining – Mining Single Dimensions Boolean Association Rules From Transactional Databases – Multilevel Association Rule – Classification and Prediction – Classification by Decision Tree Induction – Bayesian Classification – Predictive.

UNIT - IV

Data Warehouse – Architecture – Back room Technical Architecture – Architecture for Front Room Mete Data and Meta Data Catalog.

UNIT - V

Security – Vulnerabilities, Solutions, Managing Security for Data Warehouse Environment Physical Design – Data Staging.

Books for Text:

- Data Mining Concepts and Techniques - Jiawei Han, Micheline Kamber - Elsevier Publishers.
- The Data Warehouse Life Cycle Toolkit - Ralph Kimball - Wiley Publishers.

I M.Sc (IT) / II Semester

COMPUTER NETWORKS

UNIT I:

Introduction – Network Hardware – Software - Reference Models-Internet-ATM-Physical layer-Transmission media - wireless transmission – switching (circuit switching, packet switching, Hybrid switching) methods – Communication Satellites

UNIT II:

Data link layer Design issues – error detection and correction – elementary data link protocols – sliding window protocols – Data Link Layer in the Internet.

UNIT III:

Medium Access Layer – Channel Allocation Problem – Multiple Access Protocols – Ethernet Wireless LANs – Buletooth.

UNIT IV:

Network layer – design issues – Routing algorithms – Congestion control algorithms – Internet Working – IP Protocol - IP Address – Internet Control Protocol.

UNIT V:

Transport layer – design issues – Connection Management – Addressing, Establishing & Releasing a connection – Simple Transport Protocol – Internet Transport Protocol (TCP) – E-mail – Network security – Cryptography.

BOOKS FOR STUDY AND REFERENCE:

1. A.S. Tannenbaum, Computer Networks, Fourth Edition, - Pearson Education, Inc, (Prentice hall of India Ltd) 2003
2. Behrousz Forouzan – Introduction to Data Communications in Networking, TMH- 1999.
3. Fred Halsall, Data Communications, Computer Networks and Open Systems, Addison Wessley.
4. D. Bertsekas and R. Gallager, Data Networks, Prenice hall, 1992

I M.Sc (IT) / II Semester

JAVA LAB

Applications

1. Determining the order of numbers generated randomly using Random Class.
2. Implementation of Point Class for Image manipulation.
3. Usage of Calendar Class and manipulation.
4. String manipulation using Char Array.
5. Database Creation for storing a e-mail addresses and manipulation.
6. Usage of Vector Classes.
7. Implementing Thread based applications and Exception handling.
8. Application using synchronization such as Thread based, Class based and
9. synchronized statements.

Applets

1. Working with Frames and various controls.
2. Working with Dialogs and Menus.
3. Working with panel and Layout.
4. Incorporating graphics.
5. Working with Colours and Fonts.

I M.Sc (IT) / II Semester

WEB DESIGNING LAB

Applications using HTML and Java Script

1. Create a simple page representing your resume.
2. Create an existing image on a web page. Create a table, use a heading and at least one use of rowspan/colspan. Color a page and some text within the page. Link to another page.
3. Create a new file called index.html
4. Put the normal HTML document structure tags in the file.
5. Give it a title.
6. At the bottom of the page (i.e. the last thing between the body tags) put the following:
    a) A horizontal rule.
    b) A line break.
    c) The date
    d) Above this block (which is called the footer), put a title in heading tags.
    e) Add some text describing yourself. (You can split this into multiple headings and paragraphs if you wish.
7. Write a script to create an array of 10 elements and display its contents.
8. Write a function in JavaScript that takes a string and looks at it character by character.
9. Create a simple calculator using form fields. Have two fields for number entry & one field for the result. Allow the user to be use plus, minus, multiply & divide.
10. Create a document and add a link to it. When the user moves the mouse over the link, it should load the linked document on its own (User is not required to click on the link).
11. Create a procedure call using JavaScript
12. Create a forms and radio buttons and checkbox examples
13. Create a welcome cookies