

ALLIED REQUIRED PAPERS

- 1. INTERNET AND WEB DESIGN [Semester I]**
Offered To : B.A., FRENCH ,
Offered By: Computer Science
- 2. WEB COMMERCE [Semester II]**
Offered to: B.B.A.,
Offered By: Computer Applications
- 3. VISUAL PROGRAMMING USING .NET [Semester II]**
Offered To: B.Sc. MATHEMATICS
Offered By: Computer Science

Semester: I
Category: AR

Credits: 4
No. of Hours/Week: 6

INTERNET AND WEB DESIGN

Objectives:

1. To provide basic information about the computer system and the internet.
2. To provides skills to develop web pages with the help of Hyper Text Markup Language

UNIT I

Introduction to Computer Systems: -Introduction to Computers -Anatomy of a Digital Computer - Computer Architecture -Classification of Digital Computer Systems - Introduction to Computer Software - Operating Systems -General Software Features and Trends - Introduction to Telecommunications - Computer Networks - Internet & World Wide Web.

UNIT II

Understanding the Internet -A tour of the Internet – Hardware requirements – Software requirements-Internet service provider – Internet addressing – Electronic Mail -Intranets - Introduction to HTML –browsers- Web publishing.

UNIT III

Common HTML – Titles and Footers –rulers-Text Formatting –Emphasizing Material in a Web page-Text Styles-Fonts-Other Text effects-Links and addressing – HTML and Images – Introduction to Layout– Backgrounds, colors and text-paragraph settings

UNIT IV

Ordered lists – unordered list- connecting to mail- creating and managing tables -Frames and framesets-linking to particular frames-Nesting framesets-borders and scrollbars.

UNIT V

HTML and other media types –Styles –CSS- Basic interactivity and HTML – HTML Forms –Different form objects-Dynamic HTML.

Text Books:

1. Hahn Harley ,”The Internet Complete reference”,2nd Edition,1997
2. Powell A.Thomas “The Complete Reference HTML”, 2nd edition,1998

Reference Books:

- 1.Young Marget Leiving ,”The Complete Reference Internet” Millenium Edition Second Edition,2002
2. Holzner Steven , HTML Black Book, Dream Tech Press(2000)
3. Bangia Ramesh,”Web Technology”,Firewallmedia,2008

Semester: II
Category: AR

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WEB COMMERCE

Objectives:

1. To provide knowledge in business through web and the internet basics, mail, secure mails, documentation , publications.
2. To provide knowledge in different payment modes and the security through the internet.

UNIT I

The electronic commerce environment- the electronic marketers- the catalyst of electronic and web commerce-elements of e-commerce - applications of web commerce- benefits of web commerce- elements of successful market place- security issues and approaches –electronic market place technologies.

UNIT II

Definitions of e-commerce-electronic data interchange- migrations to open EDI-electronic commerce with WWW- opportunities – web statistics- commerce Net advocacy- secure commerce requirements- secure transport protocols- S-HTTP,SSL-secure transaction- secure electronic payment-secure electronic Transaction-security on web servers and enterprise networks.

UNIT III

Internet monetary payment and security requirements-payment and purchase order process-online electronic cash- E-cash interoperability-electronic payment schemes- MasterCard / Visa secure electronic transaction- E-mail and secure E-mail technologies for electronic commerce.

UNIT IV

Need for computer security – reasons for information security- types of risks- specific internet approaches-mechanisms for internet security – encryption-conventional encryption- public key encryption- applications of encryption- approaches for enterprise level security-antivirus programs.

UNIT V

Introduction to internet resources for commerce-internet applications for commerce-internet charges-searching the internet-gathering information-search tools-Web based electronic publishing-application tools-publishing on the internet-electronic journals on the web.

Text Book:

Minoli Daniel, Minoli Emma, ” Web Technology Handbook”, Tata McGraw Hill,1999.

Reference Books:

1. Ravi Kalakotar, Andrew B.Whinston , “Frontiers of Electronic Commerce” Addison-Wesley
2. Kenneth C. Laudon, Carol Guerico Traver, “E-Commerce Business, Technology, Society”, Pearson Education.

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VISUAL PROGRAMMING USING .NET

Objectives:

1. An understanding of the goals and objectives of the .NET Framework
2. A working knowledge of the Vb.NET programming language
3. After this course a student can develop an application for any real world problem.

UNIT I

Introduction to .NET, .NET Framework, CLR, Introduction to visual studio, IDE of VB.NET- Menu bar, Toolbar, Solution Explorer, Toolbox, Properties Window, Form Designer, and Placing controls on form.

UNIT II

Window properties- setting property using Event procedures - The VB.NET Language - Variables and Data Types, Forcing variables declarations, Scope & lifetime of a variable, Constants, Arrays, If statements.

UNIT III

Using Import statement - Message Box function - Function Call and arguments – List Box- Comparison Operators- Select case- Logical operators – Check Box control – Iteration statement.

UNIT IV

Loops – Do, Do While, Do Until, For Next statement. Group Box control- Combo Box control, Menu Creation – Dynamically Growing menus- Building Functions- Mathematical functions- String handling functions- option statement.

UNIT V

Introduction to Files - Handling Files and Folders using functions - Directory Class - File Class - File and Folder manipulation application- File processing using functions- File processing using streams.

Text Book :

1. Chavan Shirish, “Visual Basic.NET” 2010 ,Pearson Education, Delhi.

Reference Books:

1. Balena Francesco, “Programming Microsoft Visual Basic.NET” 2003, Microsoft Press
2. petroustos Evangelos , “Mastering VB.NET”, 2009, BPB Publications. Delhi
3. Holzner Steven , “Visual Basic .NET 2008 in 21 Days”, 2009 ,SAMS Publications. Delhi

Web Resources:

<http://www.homeandlearn.co.uk/net/vbnet.html>

<http://howtostartprogramming.com/vb-net/>

<http://www.java2s.com/Tutorial/VB/CatalogVB.htm>

VISUAL PROGRAMMING USING .NET -LAB

1. Console Application – Determine Simple interest
2. Console Application – Solution to quadratic equation
3. Console Application – Determine standard deviation for a set of numbers
4. Console Application – Determine row sum and column sum of M x N matrix
5. Console Application - Find factorial of a number using recursion
6. Console Application - Simple Class for student data with Constructor & Destructor
7. Console Application - Simple class for Complex data with function & operator overloading
8. Console Application - Staff & Student classes with multiple inheritance
9. Console Application – Exception handling mechanism
10. Windows Application –Creation of simple menu driven application
11. Windows Application – Simple Calculator with Addition, Subtraction, Multiplication and Division
12. Windows Application – Gathering details for creating & Printing Bio-data
13. Write a program to display dates in different formats.

ALLIED OPTIONAL – 1

SEMESTER III

- 1. DESKTOP PUBLISHING: [To: B.A French, Commerce]**
- 2. JAVA PROGRAMMING [To: Mathematics, Physics]**
- 3. WEB DESIGNING [To: Visual Communication, French Lit, Commerce]**

ALLIED OPTIONAL – 2

SEMESTER IV

- 1. E-COMMERCE [To: Commerce, B.Com Corp.Ship]**
- 2. MULTIMEDIA [To: Visual Communication, French Lit, Commerce]**
- 3. R PROGRAMMING [To: Mathematics, Physics]**

Semester: III
Category: AR

Credits: 4
No. of Hours/Week: 6

DESKTOP PUBLISHING

Objectives:

1. To acquire knowledge in image editing through Photoshop 6
2. To acquire knowledge in designing and animation through Flash.

UNIT I

Introduction to Photoshop 6: The Photoshop desktop, navigating in Photoshop, customizing the interface- Image fundamental: Resolution of the screen images, open duplicate & save image, Re-sampling and cropping- defining colors: Selection and Editing colors, color modes, color selection methods – Painting and editing: Paint and edit tools basics, brush shape and opacity- Retouching: Cloning image elements

UNIT II

Corrective filtering: Filter basics, blurring and image, noise factors- Full-court filtering: destructive filters, the pixelate filters, Edge enhancement filter, wrapping an image around a 3D shape, adding clouds, and spotlight- Layers: working with layers, moving, linking, aligning layers, applying transformation, The wonder of blend modes: Fully editable text- Printing images: saving jpeg, gif, and png images.

UNIT III

Introduction to Flash MX: Interface fundamental- managing windows and panels, tool box, time line window, document window- Drawing in flash: choosing colors, choosing line style, designing and alignment elements, drawing panels- Working with text: Typography, text field types in flash, text tool and property inspector, modifying text.

UNIT IV

Animation fundamentals: Basics methods of flash animation, frame-by-frame animation, modifying multi frame sequences, tweening –Applying layer type: guide layers, motion guides, mask layers – Adding sounds.

UNIT V

Flash Color: Web safe color issues - Using the flash color window -Fundamental flash Palettes - From the menu bar drawing in flash - Working with the timeline and Frame - Working with the timeline and Tween-Introduction to action scripts.

Text Books

1. Mc Clelland Deke, “Photoshop 6 for windows Bible”, IDG books India(P) Ltd.2001.
2. Reinhardt Robert ,Down Snow, “Macromedia Flash MX Bible”, Wiley publishing Inc 2002.

Reference Books

1. Orwing, “Adobe Photoshop Cs4 How Tos:100 Essential Techniques”,Pearson Education ,2009
2. Dowd Reinhardt, “Adobe Flash Cs4 Professional Bible ”, John Wiley & Sons 2009

Semester: III
Category: AO

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JAVA PROGRAMMING

Objectives:

1. To provide the basics of Object Oriented paradigms
2. To practice the principles of programming languages.
3. To practice threading and exception handling with Java

UNIT I

Fundamentals of Object Oriented Programming: Introduction-Object-Oriented Paradigm-Basic Concepts of OOPS-Benefits of OOPS-Applications of OOPS. Java Evaluation: Java Features-How java differs from c and C++ -java and Internet –java Environment. Overview of Java Language: Introduction-Simple java program-More of java-An application with two classes-java program structure-java tokens-java statements-Installing and configuring java-Implementing a java program-java virtual machine- Command line argument.

UNIT II

Constants-Variables-Data Types- declaration of variables-giving values to variables-Scope of variables-type casting. Operators and Expressions: Arithmetic Operators-Relational Operators-Logical Operators-Assignment Operators-Increment and Decrement Operators-Conditional Operators-Bitwise Operators-Special Operators-Arithmetic Expressions- Evaluation of Expressions-Precedence of Expressions-Type conversion in Expression.

UNIT III

Decision Making and Branching: If, If..Else, Nesting of If, Else if Ladder, Switch, ?: Operator. Decision Making and Looping: While, do, For Statements. Classes, Objects and Methods: Defining a class-Fields declaration-Methods declaration-Creating Objects-Accessing Class members-Constructors-Methods overloading- Static Members-Inheritance-Overriding methods-Final variable and methods-Final Class- Finalizer methods- Abstract methods and classes.

UNIT IV

Arrays, Strings: One, Two dimensional Arrays-Strings. Interfaces: Multiple Inheritance: Defining Interface-Extending Interface-Implementing Interface-Accessing Interface Variable. Packages: Putting Classes Together: Java API Packages-Using System Package-Naming Conventions-Creating Packages- Accessing a package-Using a package-Adding a class to package-Hiding Classes-Static Import.

UNIT V

Multithreaded Programming: Creating Threads-Extending a Thread class-Stopping and Blocking a Thread-Life cycle of a Thread-Using Thread methods-Thread Exception-Thread Priority-Synchronization-Implementing Runnable Interface. Managing errors and Exceptions: Types of Errors-Exceptions-Exception Handling Code-Multiple Catch Statements-Using Finally-Throwing our own Exceptions.

Text Book:

.E. Balagurusamy, "Programming with Java", Fourth Edition, Tata McGraw-Hill, New Delhi.

Reference Books:

1. Schildt Herbert, "The Complete Reference Java2", Fifth Edition, Tata McGraw-Hill, New Delhi.
2. Hubbard R. John, Programming with Java, Second Edition, 2007, Schaum's outline Series, Tata McGraw Hill

Semester: III
Category: AO

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WEB DESIGNING

Objectives:

1. To acquire knowledge in internet and world wide web.
2. Facilitates to design web sites with various forms of input through HTML tags ,DHTML and XML.

UNIT I

Introduction – Understanding the Internet -A tour of the Internet – Hardware requirements – Software requirements-Internet service provider – Internet addressing –Introduction to HTML –Web publishing.

UNIT II

Common HTML –Links and addressing – HTML and Images – Introduction to Layout – Backgrounds, colors and text –Layout with tables – Advanced Layout –Frames and Layers.

UNIT III

HTML and other media types –Style sheets – Basic interactivity and HTML – HTML Forms –Dynamic HTML.

UNIT IV

Introducing XML – An Eagle’s Eye view of XML – Your first XML Document – Attributes, Empty Element Tags and XSL – Well- Formedness.

UNIT V

Document Type Definition – Validity – Element Declaration –Attribute declaration – Entity Declaration - Namespaces – Xlinks – Xpointers.

Text Books:

- 1.Harley Hahn ,”The Internet Complete reference”,2nd Edition,1997
- 2..Powell A Thomas,”The Complete Reference HTML”,2nd edition,1998
3. Harold Elliotte Rusty ,”XML 1.1 Bible”, Wiley Publishing Inc,3rd Edition,2000

Reference Books:

1. Young Marget Leiving ,”The Complete Reference Internet” Millenium Edition Second Edition,2002
2. Holzne Steven , TML Black Book, Dream Tech Press,2000
3. Frank Boumphrey,Oliva”XML Applications” Wrox Press, 2000

Semester: III
Category: AR

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E- COMMERCE

Objectives:

1. To get knowledge in selling and buying through internet.
2. To understand various terminologies related to electronic commerce.
3. To get the awareness of various payment modes and security schemes.

UNIT I

An overview of E- Commerce- Operating System Services, Developer Services, Data Services, Application Services, Store Services, Client Services.

Types of E Commerce Solutions- Direct Marketing and Selling, Supply Chain Integration, Corporate Procurement, EDI.

UNIT II

Applications of Electronic Commerce- Application of E Commerce in Direct Marketing and Selling, Value Chain Integration, Supply Chain Management, Corporate Purchasing, Financial and Information Services, Obstacles in adopting, E-Commerce Applications, Future of E Commerce.

UNIT III

E-Strategy: Information and Strategy, The virtual value chain, seven dimensions of ecommerce strategy, planning E-commerce project, E- commerce strategy and knowledge management, E-Business Strategy and Data Warehousing and Data Mining.

UNIT IV

Customer –effective Web design: Requirements of Intelligent Websites, Website Goals and Objectives, planning the budget, analyzing website structure, fixed versus flexible webpage design, choosing a page size ,website development tools, design alternatives, outsourcing web design, testing and maintaining websites.

UNIT V

Electronic Payment Systems-Overview of Electronic Payment Systems, Cybercash (Customer to Merchant Payments, Peer to Peer Payments, Security).

Smart Card (Card Types, Closed or Open Security, Privacy, Card Costs, Non Card Costs), Electronic Banking, Electronic Fund Transfers.

Text Book:

S. Jaiswal, “Doing Business on the Internet E-COMMERCE (Electronic Commerce for Business):” Galgotia Publications.

Reference Books:

1. P.T.Joseph, S.J, ”E-Commerce An Indian Perspective:”, PHI.
2. Kenneth C. Laudon, Carol Guerico Traver, “E-Commerce Business, Technology, Society”, Pearson Education.
3. Schneider, ”E-Commerce:”, Thomson Publication.

Semester: IV
Category: AR

Credits: 4
No. of Hours/Week: 6

MULTIMEDIA SYSTEMS

Objectives:

1. To provide knowledge about the multimedia technologies including Photoshop and Flash
2. To provide the fundamentals of the digital Multimedia Systems.

UNIT I

Multimedia Definition - Where to use Multimedia - Introduction to making Multimedia- Types of authoring tools- Multimedia Applications - Usages of Multimedia.

UNIT II

Photoshop Image Editing Theory - Inside Photoshop: The Photoshop desktop – Navigating in Photoshop - Customizing the Interface .

UNIT III

Image Fundamentals :How Images work –How to Open, Duplicate, and save Images – File Format round up. Defining Colors: Selecting and Editing colors – Working in different color models.

UNIT IV

Defining the Flash Toolbars: Flash Tool basics - The flash drawing toolbar - Flash selecting tools -The Arrow tool-The drawing and painting tools -The pencil tool-New pencil tool functionality -Using the brush tool -The dropper tool-The Ink bottle tool -The text tool.

UNIT V

Flash Color: Web safe color issues - Using the flash color window -Fundamental flash Palettes - From the menu bar drawing in flash - Working with the timeline and Frame - Working with the timeline and Tween.

Text Books:

1. Tay Vaug Lerp “Mutimedia Technology” Edition 5 (Unit I)
2. Deke McClelland “Photoshop 6 for Windows”,Edition 6(Unit II, Unit III)
3. Robert Reinhardt and Lentz “Flash 4” Edition 4 (Unit IV, V)

Reference Books:

1. Ranjan Parekh “Principles of Multimedia” , Tata McGraw Hill, Second Edition,2007
2. Reinhardt Dowd “**Adobe Flash Cs4 Professional Bible** ” 2009
3. Orwing “Adobe Photoshop Cs4 How Tos 100 Essential Techniques”2009

Semester: IV
Category: AR

Credits: 4
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R PROGRAMMING

Objectives:

1. To deal with the basic constructs of R language.
2. To understand and practice frequently used statistical functions.
3. To solve real world problems through built-in functions in R language.

UNIT I

Introduction –Assignment and underscore-variable names-vectors-sequences-data types-declarations- Arithmetic operators-Assignment Operators-Boolean Operators-List-missing values-comments

UNIT II

Arrays-functions-environment objects-converting object to functions-Date time conversion functions-
object attributes-attach object to search path-manipulating body of a function-function calls-partial substitution in expression-Combine R objects by rows and columns

UNIT III

Introduction to descriptive statistics-diagrammatic representation of data-graphical representation of data-
measures of central tendency-measures of dispersion-measures of skewness and kurtosis-selection of representative samples.

UNIT IV

Introduction to Probability distributions-Probability- probability distributions-special discrete distributions-continuous probability distributions-special continuous distributions.

UNIT V

Introduction to correlation and regression-correlation-inference procedures for correlation coefficient-
linear regression-inference procedures for simple linear model-validation of linear regression model- transformation of the variables-polynomial regression models.

Text Book:

Sudha G. Purohit, Sharad D. Gore, Shailaja R. Deshmukh, "Statistics using R" , Narosa publication, 2009.

Reference Books:

1. Alain F. Zuur, Elena N. Ieno, Erik H.W.G. Meesters, "A Beginner's Guide to R", Springer, 2009
2. Phil Spector, "Data Manipulation with R", Springer, 2008.

E-Books:

1. John Verzani , "Using R for Introductory Statistics", Chapman & Hall/CRC 2004 ISBN/ASIN: 1584884509 ISBN-13: 9781584884507
2. W. N. Venables, D. M. Smith and the R Development Core Team, "An Introduction to R",