B.Com III year

Subject- Computer Application

Paper-I

Webpage Designing using PHP

Max Marks: 40   **Min Marks: 13**

Course Objective: To acquire knowledge and Skills for creation of Webpages considering both client-and server-side Programming.

Course Outcome: Students are able to design a webpage using HTML, CSS, JavaScript and also able to create dynamic websites doing connectivity with database.

Unit-I: Introduction to webpage , static and dynamic webpages, introduction to web page programming using HTML, structure of HTML program, Introduction to HTML tags : body and heading tag, formatting tags, image tags, hyperlinks, Lists, tables, frames. Html forms: SELECT, OPTION, SUBMIT and RESET.

Unit II: Introduction to JavaScript: syntax, Data types, variables in JavaScript, Operator and expression in JavaScript, Control statements: If…then, looping structures, JavaScript functions: dialog boxes, User -defined functions, Event handling in JavaScript, Built-In Functions: String functions, Math functions, Date functions, Validation.

Unit III: Introduction to Cascading Style sheets: Syntax, Selector. Inserting CSS: External, Internal and Inline. CSS: Text, Fonts, Links, Lists, and Tables, **Introduction to PHP**: PHP Essentials, Local Machine, Development Environment, HTML and PHP. Variables, Constants, Operators. Control Structures: if, switch, for, while, do....while, for-each.

Unit IV: Functions: function call, passing arguments, pass by value, and pass by reference, returning values to functions. Forms, GET and POST data, Date and Time, File Upload, Session.

UNIT V: Introduction to My-SQL , creating Database in My-SQL, My-SQL and PHP: Database connectivity, Adding, modifying and deleting records, Access Records From Database. Creating and managing sessions in PHP.

Textbooks:

HTML5 Black Book Kogent Learning Solutions Inc. Dreamtech PRESS

The Complete Reference PHP by Steven Holzner McGraw Hill Education India Private Limited New Delhi

http://www.nettech.in/e-books/Teach-Yourself-PHP4-in-24-Hours.pdf(Ebook)

List of Practicals in HTML, Javascript and PHP

1. Write a HTML program to implement tables with formatting.
2. Write a HTML program to implement frames.
3. Write a HTML program to implement lists.
4. Write a CSS formatted script to implement hyperlinks.
5. Write a JavaScript program to find the area of a triangle where lengths of the three of its sides are 5, 6, 7.
6. Write a JavaScript program to calculate multiplication and division of two numbers (input from user).
7. Write a JavaScript program to check two given numbers and return true if one of the number is 50 or if their sum is 50.
8. Write a JavaScript program to convert temperatures to and from Celsius, Fahrenheit.
   [Formula : c/5 = (f-32)/9 [where c = temperature in Celsius and f = temperature in Fahrenheit]
   Expected Output : 60°C is 140 °F 45°F is 7.222222222222222°C
9. Write a JavaScript program to create a new string adding "" in front of a given string. If the given string begins with "Py" then return the original string.
10. Write a JavaScript program to extract the first half of a string of even length.
11. Write a JavaScript function that checks whether a passed string is palindrome or not?
12. Write a JavaScript function to find the factorial
13. Write a JavaScript program to display the current day and time in the following format.
    Today is : Tuesday. Current time is : 10 PM : 30 : 38
14. Write a JavaScript function to find the highest value in an array.
15. Write a JavaScript function to calculate the sum of n entered values using Prompt.
16. Write a JavaScript function to check whether a given value is even or odd.
17. Create a simple HTML form and accept the user name and display the name through PHP echo statement.
18. Write a PHP script, which changes the color of the first character of a word.
19. Write a PHP program to swap two variables.
20. Write a PHP program to convert word to digit.
21. Create a short website with the following dynamic web pages with the proper web template.
    a. Login form.
    b. Registration form with insert, Search, update and delete option.

BCOM – III YEAR

Subject- Computer Application

Paper- II

Cyber Security and Software Engineering

Max Marks: 40   **Min Marks: 13**

Objective:
To provide an understanding of principal concepts, major issues, technologies and basic approaches in cyber security. Develop a basic understanding of cryptography, how it has evolved and some key encryption techniques used today. Knowledge of basic SW engineering methods and practices, and their appropriate application.
Course Outcome:
Provide security of the data over the network. Do research in the emerging areas of cryptography and network security. Basic knowledge and understanding of the analysis and design of complex systems. Ability to apply software engineering principles and techniques. To produce efficient, reliable, robust and cost-effective software solutions.

UNIT I

Information Security Concepts: Information security issues, goals, architecture, Attacks, Security Services and Mechanisms. Introduction to Cryptography: Network security model, Cryptographic systems, Cryptanalysis, Steganography. Types of Cryptography: Symmetric key and Asymmetric Key Cryptography, Encryption and Decryption Techniques. Cryptographic Algorithms: Data Encryption Standard, Advanced Encryption Standard, RSA (Introductory concepts only)

UNIT-II

Overview of Security threats and Vulnerability: Types of attacks on Confidentiality, Integrity and Availability. Vulnerability and Threats. Malware: Viruses, Worms, Trojan horses. Security Counter Measures; Intrusion Detection, Antivirus Software, Information Security, Privacy and Ethics, Cyber Crime and Cyber Terrorism, Hacking: Ethical issues, Ethical Hacking.

UNIT – III

SOFTWARE: Software Characteristics, Components and Applications. Software Engineering - A Layered Technology, Software Process Models [Linear Sequential Model, Prototype and RAD Model], Evolutionary Software Process Model [Incremental Model and Spiral Model].

UNIT – IV

Project Management Concepts – People Problem and Process. SOFTWARE PROJECT PLANNING: Objectives, Scope, Project Estimation, Decomposition Techniques. Empirical Estimation Models.

UNIT – V

S/W Quality Assurance: Quality Concepts, SQA activities, S/W Reviews, Formal Technical Reviews, S/W Reliability, S/W TESTING TECHNIQUES: S/W Testing Fundamentals, Test Case Design, White and Black Box Testing, Basic Path Testing, Unit Testing, Integration Testing, Validation Testing, System Testing, Debugging..

Text Books:

Software Engineering By R.S.Pressman,Edition V- [Unit 1-4 & CASE] and Edition VI (Reuse)

An Integrated Approach To Software Engineering By Pankaj Jalote

Forouzan, B.A., Cryptography & Network Security. Tata McGraw-Hill Education, 2010

Kahate, A. Cryptography and Network Security. McGraw-Hill Higher Ed., 2009.

Godbole, N., Information Systems Security: Security Management, Metrics, Frameworks and Best Practices. 1st Ed. John Wiley & Sons India, 2009. Page 11 of 46 Syllabus of M-Tech. in Computer Science & Technology (Cyber Security) 2018-19

Reference Books:

Software Engineering (7th Edition) Addison- Wesley 2004 ,Ian Sommerville

Software Engineering Hand book Auerbach publication, Jessica Keyes
Software Engineering Principles and Practice 2nd edition Wiley

Riggs, C., Network Perimeter Security: Building Defence In-Depth, AUERBACH, USA, 2005.

Northcutt S., Inside Network Perimeter Security, 2nd Edition., Pearson Education, 2005.

Stallings, W., Network Security Essentials: applications and standards. 3rd ed. Pearson Education India, 2007.

Stallings, W., Cryptography and Network Security: Principles and Practice. 6th ed. Pearson, 2004.

Kim. D., and Solution, M.G., Fundamentals of Information System Security. Jones & Bartlett Learning, 2010.