

## **I. WEB PROGRAMMING - II (CREDITS: 4)**

*Unit I:* Client Server Architecture and Web Protocols: Introduction, Client/Server Evolution, Two Sides of Web Programming, Advantages of Client/Server Architecture, Disadvantages of Client/Server Model, Communication between Browser and Web Server, Server Side Scripting and Technologies: Introduction, How to Choose Web Programming Languages, List of Popular Programming Languages, Java/Servlet, Perl, PHP, C Language, ASP, ColdFusion, AJAX, jQuery, Common Gateway Interface (CGI)

*Unit II:* PHP Scripting Language: Introduction, About PHP, Variable and Data Types in PHP, Operators, Input Output, Control Structures, Arrays, Functions, Strings, Regular Expressions, Interacting with Database, Understand MySQL, Simple SQL Retrieval, PHP Database Functions

*Unit III:* Sessions and Cookies in PHP: Introduction, Understand Sessions, Understand Cookies, Uses of Cookies, How to Create a Cookie in PHP, How to Delete Cookies, Retrieving cookie data, Where are cookies used?

*Unit IV:* Introduction to AJAX: JavaScript, XML, How Ajax works, Importance of Ajax, XMLHttpRequest Object, How to Send Request to a Server, Request Methods, AJAX Security Concerns, Introduction to Perl: Perl Background, History of Perl, Perl Development Life Cycle, Comments, How Perl Works, Scalars and Scalar variables, Perl Functions, Print, Length, substr / lc, Reverse, Substr

*Unit V:* Introduction to jQuery, Understanding jQuery, jQuery - Event Handling, Downloading jQuery, jQuery Selector, The Element Selector, The #Id Selector, The Class Selector, jQuery Events, Introduction to Common Gateway Interface (CGI), How CGI Works, CGI Deployment

*Unit VI:* Web Application Security: Introduction, Understanding Web Application Security, The primary web security controls, Common words used in computer security, Main Types of Website Attacks, List of types of website's and web system's attacks, Common mistakes that introduces security holes in websites and web systems, How Hackers Detect existence of security holes in Websites or Web systems, Detection and Solution of the Attacks, Categories of attacks, Preventing websites and web applications from being hacked, Solution to website's and web system's attacks