Internet Technology
IT701
Contracts: 3L
Credits- 3

Module I   [6L]
Introduction (1L): Overview, Network of Networks, Intranet, Extranet and Internet.

World Wide Web (1L): Domain and Sub domain, Address Resolution, DNS, Telnet, FTP, HTTP.

Review of TCP/IP (1L): Features, Segment, Three-Way Handshaking, Flow Control, Error Control, Congestion control, IP Datagram, IPv4 and IPv6.

IP Subnetting and addressing (1L): Classful and Classless Addressing, Subnetting. NAT, IP masquerading, IP tables.

Internet Routing Protocol (1L): Routing -Intra and Inter Domain Routing, Unicast and Multicast Routing, Broadcast.

Electronic Mail (1L): POP3, SMTP.
Module II   [9L]
HTML (3L): Introduction, Editors, Elements, Attributes, Heading, Paragraph. Formatting, Link, Head, Table, List, Block, Layout, CSS. Form, Iframe, Colors, Colorname, Colorvalue.

Image Maps (1L): map, area, attributes of image area.

Extensible Markup Language (XML) (4L): Introduction, Tree, Syntax, Elements, Attributes, Validation, Viewing. XHTML in brief.

CGI Scripts (1L): Introduction, Environment Variable, GET and POST Methods.

Module III   [10L]
PERL (3L): Introduction, Variable, Condition, Loop, Array, Implementing data structure, Hash, String, Regular Expression, File handling, I/O handling.

JavaScript (4L): Basics, Statements, comments, variable, comparison, condition, switch, loop, break. Object - string, array, Boolean, reg-ex. Function, Errors, Validation.

Cookies (1L): Definition of cookies, Create and Store a cookie with example.

Java Applets (2L): Container Class, Components, Applet Life Cycle, Update method; Parameter passing applet, Applications.

Module IV   [4L]
Client-Server programming In Java (2L): Java Socket, Java RMI.

Threats (1L): Malicious code-viruses, Trojan horses, worms; eavesdropping, spoofing, modification, denial of service attacks.

Network security techniques (2L): Password and Authentication; VPN, IP Security, security in electronic transaction, Secure Socket Layer (SSL), Secure Shell (SSH).

Firewall (1L): Introduction, Packet filtering, Stateful, Application layer, Proxy.

Module V   [5L]
Internet Telephony (1L): Introduction, VoIP.

Multimedia Applications (2L): Multimedia over IP: RSVP, RTP, RTCP and RTSP. Streaming media, Codec and Plugins, IPTV.

Search Engine and Web Crawler (2L): Definition, Meta data, Web Crawler, Indexing, Page rank, overview of SEO.

Reference:
1. Web Technology: A Developer's Perspective, N.P. Gopalan and J. Akilandeswari, PHI Learning, Delhi, 2013. (Chapters 1-5,7,8,9).
2. Internetworking Technologies, An Engineering Perspective, Rahul Banerjee, PHI Learning, Delhi, 2011. (Chapters 5,6,12)