Module 1:

Overview, Network of Networks, Intranet, Extranet and Internet. World Wide Web
Domain and Sub domain, Address Resolution, DNS, Telnet, FTP, HTTP.

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

IP Subnetting and addressing : Classful and Classless Addressing, Subnetting. NAT, IP
masquerading, IP tables.

Internet Routing Protocol: Routing -Intra and Inter Domain Routing, Unicast and Multicast
Routing, Broadcast.

Electronic Mail : POP3, SMTP.

Module 2:

HTML : Introduction, Editors, Elements, Attributes, Heading, Paragraph. Formatting, Link, Head,
Table, List, Block, Layout, CSS. Form, Iframe, Colors, Colorname, Colorvalue.

Image Maps : map, area, attributes of image area.

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

Module 3-
PERL : Introduction, Variable, Condition, Loop, Array, Implementing data structure, Hash, String,
Regular Expression, File handling, I/O handling.

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

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

Module 4:

Client-Server programming In Java :
Java Socket, Java RMI. Threats: Malicious code-viruses, Trojan horses, worms; eavesdropping,
spoofing, modification, denial of service attacks.

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

Firewall : Introduction, Packet filtering, Stateful, Application layer, Proxy.

Module 5:

Internet Telephony :
Introduction, VoIP.

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

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