NOTE:

1. There are TWO PARTS in this Module/Paper. PART ONE contains FOUR questions and PART TWO contains FIVE questions.

2. PART ONE is to be answered in the TEAR-OFF ANSWER SHEET only, attached to the question paper, as per the instructions contained therein. PART ONE is NOT to be answered in the answer book.

3. Maximum time allotted for PART ONE is ONE HOUR. Answer book for PART TWO will be supplied at the table when the answer sheet for PART ONE is returned. However, candidates, who complete PART ONE earlier than one hour, can collect the answer book for PART TWO immediately after handing over the answer sheet for PART ONE.

TOTAL TIME: 3 HOURS
TOTAL MARKS: 100
(PART ONE – 40; PART TWO – 60)

PART ONE
(Answer all the questions)

1. Each question below gives a multiple choice of answers. Choose the most appropriate one and enter in the “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)

   1.1. The main function of a browser is to
   A) compile HTML
   B) interpret HTML
   C) de-compile HTML
   D) interpret CGI programs

   1.2. Spider is a
   A) a program that crawls around the web and stores pages in search engines.
   B) hacking software that spreads virally
   C) software that examines network vulnerabilities
   D) a protocol for distributing large files

   1.3. FTP does not use
   A) two transfer mode
   B) control connection to remote computer before file can be transferred
   C) **User Datagram Protocol (UDP)**
   D) authorization of a user through login and password verification

   1.4. ___________ is used to enable the use of active documents
   A) HTML
   B) CGI
   C) JAVA
   D) **All the above**

   1.5. In `<IMG SRC=’C:PICTURE/BB1.gif’ ALIGN=middle>` ALIGN is
   A) A tag
   B) The head
   C) The body
   D) **An attribute**

   1.6. Web pages are uniquely defined using
   A) IP addresses
1.7. Which of the following services are available on the World Wide Web?
   i) Encryption
   ii) HTTP
   iii) HTML
   iv) Firewalls
A) i) and ii)  
B) ii) and iii)  
C) iii) and iv)  
D) i) and iv)  

1.8. Internet uses
A) packet switching  
B) circuit switching  
C) telephone switching  
D) telex switching  

1.9. The ownership rights as related to content on the web are governed under
A) Copyright law  
B) Patent law  
C) Data protection law  
D) Privacy law  

1.10. Multipurpose Internet Mail Extension (MIME) was developed
A) to support email messages containing text and video  
B) to support email messages containing text, audio and video  
C) to support email messages containing audio and video  
D) to support text-based email messages  

2. Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the “tear-off” sheet attached to the question paper, following instructions therein. (1x10)

2.1 TCP provides packet-level reliability. TRUE  
2.2 Subnet mask allows flexible division of address bits into a network address part and a host address part. TRUE  
2.3 The Internet is managed and controlled by the US Government. FALSE  
2.4 There are up to six levels of header tag in HTML. TRUE  
2.5 Client sends the request in the form of URLs to the server. TRUE  
2.6 A single hypertext document can contain link to one document on the World Wide Web. FALSE  
2.7 IP only allows fixed packet sizes. TRUE  
2.8 DNS is a distributed database offering strong consistency and atomicity guarantees. TRUE  
2.9 HTTP uses TCP and DNS uses UDP. FALSE  
2.10 Connectivity is equivalent to a point-to-point physical link. TRUE  

3. Match words and phrases in column X with the closest related meaning/word(s)/phrase(s) in column Y. Enter your selection in the “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)
<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>A technique in which two different keys are used for performing encryption and decryption</td>
<td>A. Public key infrastructure</td>
</tr>
<tr>
<td>3.2</td>
<td>The Internet transfer protocol means that you are working through a secure web connection</td>
<td>B. FTP</td>
</tr>
<tr>
<td>3.3</td>
<td>Every web document must begin and end with</td>
<td>C. &lt;/HTML&gt; and &lt;/HTML&gt;</td>
</tr>
<tr>
<td>3.4</td>
<td>The path up to destination is allocated before the transmission of message begins</td>
<td>D. TCP</td>
</tr>
<tr>
<td>3.5</td>
<td>Control Gateways in a computer by enabling selected connections from external network and disabling selected connection to external networks</td>
<td>E. Firewalls</td>
</tr>
<tr>
<td>3.6</td>
<td>It allows user to dial into the Internet</td>
<td>F. https</td>
</tr>
<tr>
<td>3.7</td>
<td>It is a process that along with providing an interface to the user, sends messages into a Socket</td>
<td>G. &lt;/HTML&gt; and &lt;/HTML&gt;</td>
</tr>
<tr>
<td>3.8</td>
<td>Connectionless protocol</td>
<td>H. Ping</td>
</tr>
<tr>
<td>3.9</td>
<td>It is a cell relay protocol that in combination with SONET, allows high-speed connections</td>
<td>I. PPP</td>
</tr>
<tr>
<td>3.10</td>
<td>It is an application program that uses the services of ICMP to test the reachability of a host</td>
<td>J. UDP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K. ATM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L. POP3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M. HTTP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. Web browser</td>
</tr>
</tbody>
</table>

4. Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)

<table>
<thead>
<tr>
<th>A.</th>
<th>Client-Server</th>
<th>B.</th>
<th>Telnet</th>
<th>C.</th>
<th>Internet Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.</td>
<td>Browser</td>
<td>E.</td>
<td>IMAP4</td>
<td>F.</td>
<td>Active</td>
</tr>
<tr>
<td>G.</td>
<td>Common Gateway Interface</td>
<td>H.</td>
<td>Net id</td>
<td>I.</td>
<td>FTP</td>
</tr>
<tr>
<td>J.</td>
<td>Host id</td>
<td>K.</td>
<td>Decryption</td>
<td>L.</td>
<td>EMAIL</td>
</tr>
<tr>
<td>M.</td>
<td>SMTP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.1 **Decryption** transforms an intentionally unintelligible message (ciphertext) into meaningful information.

4.2 **Active** document is a copy of a program retrieved by the client and executed at the client site.

4.3 Multipurpose Internet Mail Extension (MIME) is an extension of **EMAIL** that allows the transfer of multimedia and other non-ASCII messages.

4.4 POP3 and **IMAP4** are protocols used by a mail server in conjunction with SMTP to receive and hold email for hosts.

4.5 Domain Name System (DNS) is a **Client-Server** application that identifies each host on the Internet with a unique user-friendly name.

4.6 In remote login, **Telnet** is used to access distant service.
4.7 IPv6 is the latest version of the Internet Protocol which has a 128-bit address space, a resource allocation, and increased security measures.

4.8 The Common Gateway Interface is a standard for creating and handling dynamic Web documents.

4.9 Java is a combination of a high-level programming language, a run-time environment, and a class library that allows a programmer to write an active document and a Browser to run it.

4.10 The portion of the IP address that identifies the network is called the Net id.