

## A2-R4: INTERNET TECHNOLOGY AND WEB DESIGN

### 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 **OMR ANSWER SHEET** only, supplied with 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 “OMR” answer sheet supplied with the question paper, following instructions therein. (1x10)**
  - 1.1 On the Internet which version of Internet Protocol is most widely used
    - A) IPv1
    - B) IPv3
    - C) IPv4
    - D) IPv6
  - 1.2 A web publishing tool developed by Microsoft is
    - A) Netscape Navigator
    - B) Front Page
    - C) Hot Metal
    - D) Page Mill
  - 1.3 What is a Cookie?
    - A) Computer Code used to show animation and play sound.
    - B) Information sent to the computer that is used later to give information back to a visited web site.
    - C) An advertisement that will at sometime be displayed on your screen.
    - D) Computer code that automatically records all purchases and payments, you make from your computer.
  - 1.4 SMTP is associated with
    - A) TCP/IP
    - B) Electronic Mail
    - C) Internet Explorer
    - D) www
  - 1.5 Secure Socket Layer (SSL), a protocol developed by
    - (A) IETF
    - (B) APPLE
    - (C) Netscape
    - (D) HP

- 1.6 Which of the following is best suited for networking in a building?  
A) WAN  
B) MAN  
C) LAN  
D) SAN
- 1.7 The pieces of information that are sent over internet is  
A) Cookies  
B) Tags  
C) Packets  
D) Components
- 1.8 Which of the following is NOT a valid image format?  
A) tiff  
B) gif  
C) jpeg  
D) mpeg
- 1.9 Which type of physical cable has fastest transmission speed?  
A) Twisted-wire Pairs  
B) Co-axial Cable  
C) Fiber Optic Cable  
D) Micro-Wave
- 1.10 An applet is a  
A) picture displayed on a web page.  
B) program that can be embedded in another application.  
C) tag is HTML program.  
D) security Protocol.

**2. Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the “OMR” answer sheet supplied with the question paper, following instructions therein. (1x10)**

- 2.1 TCP/IP divides the message into packets that are sent over the lines and directed by routers to their destination.
- 2.2 A Permanent assigned IP address, one that is given to a computer or router connected to the internet is called dynamic IP address.
- 2.3 IPv6, the latest IP routing protocol has IP address size of 128 bits.
- 2.4 Using cookies file, a web server can keep track of the web pages you visit.
- 2.5 A Meta Search engine maintains its own database information.
- 2.6 In a dithered image, a lot of information is lost from the original image and it can not be reconstructed from the file containing dithered image.
- 2.7 In an Email message, users in Cc fields can not see other recipients whereas users in BCC fields can see all the recipients of the message.
- 2.8 In a <FRAMESET> tag COLS and ROWS can not be used in conjunction with one another.
- 2.9 The image and hyperlink both can not be included in a table in HTML.
- 2.10 JPG can save full color information about an image comparing to GIF, since JPG store 24 bits per pixel whereas GIF is limited to 8 bits per pixel.

**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 “OMR” answer sheet supplied with the question paper, following instructions therein. (1x10)**

X		Y	
3.1	A Computer Program that translates between domain names and IP addresses	<b>A.</b>	Cryptography
3.2	A measure of the rate at which data is transferred over telecommunication lines.	<b>B.</b>	Cache
3.3	Local Memory where copies of frequently used or recently requested web pages are saved.	<b>C.</b>	Resolver
3.4	A set of legal rights extended to an individual or company that has produced a creative work.	<b>D.</b>	Patent Law
3.5	The science of encoding and decoding information.	<b>E.</b>	Baud rate
3.6	A mechanism that can be used to sign an electronic Document officially.	<b>F.</b>	Copyright
3.7	A web document that contains any combination of audio, graphics, movie or video as well as links and navigation tools.	<b>G.</b>	Bookmarks
3.8	A system that is used by mailer and web browser to identify file contents by use of file extension.	<b>H.</b>	Router
3.9	A special purpose computer that directs packets of data along a network.	<b>I.</b>	Netiquette
3.10	While using email to express opinions or ideas, especially when the message will be read by people who do not know you well.	<b>J.</b>	Lynx
		<b>K.</b>	Hypermedia
		<b>L.</b>	Digital signature
		<b>M.</b>	MIME

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 “OMR” answer sheet supplied with the question paper, following instructions therein. (1x10)

<b>A.</b>	ISDN	<b>B.</b>	Gatherer	<b>C.</b>	DHCP
<b>D.</b>	Javascript	<b>E.</b>	Network	<b>F.</b>	MODEM
<b>G.</b>	WWW	<b>H.</b>	Transport	<b>I.</b>	Router
<b>J.</b>	IMAP	<b>K.</b>	WWW	<b>L.</b>	History
<b>M.</b>	SLIP				

- 4.1 \_\_\_\_\_ protocol used for transferring packets over a telephone lines.
- 4.2 \_\_\_\_\_ is a scripting language that is embedded in HTML and is useful for adding dynamic features to web pages.
- 4.3 \_\_\_\_\_ uses regular telephone lines and replaces Modem with special adaptors up to five times faster than a traditional Modem.
- 4.4 \_\_\_\_\_ makes it easy and possible for nearly anyone to publish and browse hypertext documents on the internet.
- 4.5 The component that traverses the web, collecting information about pages is called \_\_\_\_\_.
- 4.6 A protocol that has been designed to transport messages between workstation and mail server is called \_\_\_\_\_.
- 4.7 \_\_\_\_\_ is a protocol by which a machine can obtain an IP number (and other network configuration) from a server on the local network.
- 4.8 IP protocol is an implementation of the OSI \_\_\_\_\_ layer.
- 4.9 \_\_\_\_\_ feature of browser used to re-visit web sites visited during a given session.
- 4.10 Device used for translating digital signals into analog signals and vice-versa is called a(n) \_\_\_\_\_.

## PART TWO

(Answer any **FOUR** questions)

- 5.**
- a) Explain structure of e-mail. What are various e-mail protocols used for sending and receiving e-mails? Explain in short.
  - b) What are Cookies? How the Cookies are created and how do you remove Cookies from Internet Explorer?
  - c) What is MIME? How does it help in sending binary data via e-mail message?
- (5+5+5)**
- 6.**
- a) What is Web Page? How webpage retrieval works with a given URL, Explain? If an HTML document contains a number of identical copies of same image, does the browser bring over multiple copies of image, or is it "Smart" enough to reuse the first copy it brings over?
  - b) Briefly describe the function of Router.
- (10+5)**
- 7.**
- a) Compare and Contrast Mozilla Firefox and Microsoft Internet browser. Summarize your findings in a page.
  - b) Does `<SELECT> .. </SELECT>` tag lies inside `<OPTION> .. <OPTION>` tag or vice-versa? What does `<OPTION>...</OPTION>` tag do? Give an example with attributes.
  - c) What are Web publishing tools? What is the meaning of document management in context of Web publishing?
- (5+5+5)**
- 8.**
- a) What is JavaScript? Write a JavaScript program to input any positive number in a Text Box and display whether it is a prime number or not?
  - b) Write the syntax for including the audio file "song.midi" on a web page. What is the file extension of a VRML file? Write down the HTML tag to include that file.
- (10+5)**
- 9.** Write short notes on **any three** of the following:
- a) Static IP Address and Dynamic IP Address
  - b) Firewall and Proxy Server
  - c) Network Sniffer
  - d) Internet and Intranet
- (5+5+5)**