A2-R4/B1.2-R4 : INTERNET TECHNOLOGY AND WEB DESIGN

अवधि : 03 घंटे
DURATION : 03 Hours

अधिकतम अंक : 100
MAXIMUM MARKS : 100

ओएमआर शीट सं. :
OMR Sheet No. :

रोल नं. :
Roll No. :

उत्तर-पुस्तिका सं. :
Answer Sheet No. :

परीक्षार्थी का नाम :
Name of Candidate : _____

परीक्षार्थी के हस्ताक्षर :
;Signature of Candidate : _____

परीक्षार्थियों के लिए निर्देश :

Instructions for Candidate :

कृपया प्रश्न-पुस्तिका, ओएमआर शीट एवं उत्तर-पुस्तिका में दिये गए निर्देशों को ध्यानपूर्वक पढ़ें।	Carefully read the instructions given on Question Paper, OMR Sheet and Answer Sheet.
प्रश्न-पुस्तिका की भाषा अंग्रेजी है। परीक्षार्थी केवल अंग्रेजी भाषा में ही उत्तर दे सकता है।	Question Paper is in English language. Candidate can answer in English language only.
इस मॉड्यूल/पेपर के **दो भाग** हैं। **भाग एक** में **चार** प्रश्न और **भाग दो** में **पाँच** प्रश्न हैं।	There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.
भाग एक ''वैकल्पिक'' प्रकार का है जिसके कुल अंक 40 है तथा **भाग दो** ''व्यक्तिपरक'' प्रकार का है और इसके कुल अंक 60 है।	**PART ONE** is Objective type and carries 40 Marks. **PART TWO** is Subjective type and carries 60 Marks.
भाग एक के उत्तर, **ओएमआर उत्तर-पुस्तिका** पर ही दिये जाने हैं। **भाग दो** की उत्तर-पुस्तिका में **भाग एक** के उत्तर **नहीं** दिये जाने चाहिए।	**PART ONE** is to be answered in the **OMR ANSWER SHEET** only. **PART ONE** is **NOT** to be answered in the answer book for **PART TWO**.
भाग एक के लिए अधिकतम समय सीमा **एक घण्टा** निर्धारित की गई है। **भाग दो** की उत्तर-पुस्तिका, **भाग एक** की उत्तर-पुस्तिका जमा कराने के पश्चात् दी जाएगी। तथापि, निर्धारित एक घंटे से पहले **भाग एक** पूरा करने वाले परीक्षार्थी **भाग एक** की उत्तर-पुस्तिका निरीक्षक को सौंपने के तुरंत बाद, **भाग दो** की उत्तर-पुस्तिका ले सकते हैं।	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** to the Invigilator.
परीक्षार्थी, उपस्थिति-पत्रिका पर हस्ताक्षर किए बिना और अपनी उत्तर-पुस्तिका, निरीक्षक को सौंपे बिना, परीक्षा हॉल/कमरा नहीं छोड़ सकते हैं। ऐसा नहीं करने पर, परीक्षार्थी को इस मॉड्यूल/पेपर में अयोग्य घोषित कर दिया जाएगा।	**Candidate cannot leave the examination hall/room without signing on the attendance sheet and handing over his/her Answer Sheet to the invigilator. Failing in doing so, will amount to disqualification of Candidate in this Module/Paper.**
प्रश्न-पुस्तिका को खोलने के निर्देश मिलने के पश्चात् एवं उत्तर लिखना आरम्भ करने से पहले उम्मीदवार जाँच कर यह सुनिश्चित कर लें कि प्रश्न-पुस्तिका प्रत्येक दृष्टि से संपूर्ण है।	After receiving the instruction to open the booklet and before starting to answer the questions, the candidate should ensure that the Question Booklet is complete in all respect.

जब तक आपसे कहा न जाए, तब तक प्रश्न-पुस्तिका न खोलें।
DO NOT OPEN THE QUESTION BOOKLET UNTIL YOU ARE TOLD TO DO SO.

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 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

1.2 Webpages are uniquely defined using :

    (A)   IP addresses

    (B)   URL

    (C)   Domain

    (D)   File name

1.3 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

1.4 XML is :

    (A)   Superset of HTML

    (B)   Extensible Markup Language

    (C)   Part of DHTML

    (D)   Presentation language

1.5 A Cookie is :

    (A)   An advertisement displayed on a web page

    (B)   A program that records website visits

    (C)   Information stored by web server on client system

    (D)   A technology to store password on client system

1.6 SSL is a _____.

    (A)   Scripting language

    (B)   Browser

    (C)   Secure connection

    (D)   Authoring tool

1.7 The HTML tags that create a table header are :

(A) <head></head>

(B)

(C) <th></th>

(D) <td><td>

1.8 A modem is not needed when accessing the internet through :

(A) Wi-Fi

(B) LAN

(C) Cable

(D) None of the above

1.9 A software that prevents external access to a system is termed as :

(A) Gateway

(B) Firewall

(C) Intrusion Prevention system

(D) Anti-Virus

1.10 On Internet, which version of the Internet Protocol is the most widely used ?

(A) Ipv1

(B) IPv6

(C) IPv2

(D) IPv4

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 E-mail is limited to text based messages.

2.2 Default port of SMTP is 25.

2.3 Coaxial cable and twisted-pair cable are type of wireless media.

2.4 There are no collisions in full duplex mode.

2.5 Java script executes on web server.

2.6 IMAP is geographic information system.

2.7 TCP provides packet-level reliability.

2.8 HTTP uses TCP and DNS uses UDP.

2.9 Firewall is used to block sites on a LAN.

2.10 ARPANET was the world's first operational packet switched network.

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 attached to the question paper, following instructions therein.

(1x10)

	X		Y
3.1	An application that is downloaded from a webpage and executed by a browser Software	A.	UDP
3.2	A text only web browser	B.	https
3.3	Connectionless protocol	C.	CSMA/CD
3.4	The Internet transfer protocol means that you are working through a secure web connection	D.	Applet
3.5	E-mail address must have	E.	Open Source
3.6	Ethernet Technology	F.	Linux
3.7	Program code freely available	G.	Network Layer
3.8	3rd layer of OSI model	H.	@sign
3.9	Length of IPv4	I.	Application Layer
3.10	Maximum data transfer rate	J.	64
		K.	Hacker
		L.	32
		M.	Bandwidth

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 attached to the question paper, following instructions therein.** (1x10)

A.	Skype	**B.**	Hacking	**C.**	Net id
D.	FTP	**E.**	Encryption	**F.**	IP
G.	Hijacking	**H.**	Server	**I.**	Client
J.	Telnet	**K.**	Search engine	**L.**	Archive
M.	Chat				

4.1 Process of converting data into unrecognizable form is known as _____.

4.2 WEB server requires _____ address to connect to internet.

4.3 Famous internet phone service is _____.

4.4 Control connection and data connection are used in _____.

4.5 Computer crime is known as _____.

4.6 In remote login, _____ is used to access distant service.

4.7 The portion of the IP address that identifies the network is called the _____.

4.8 JSP is _____ side scripting language.

4.9 _____ is using Indexing mechanism.

4.10 A storage repository for software, data or other materials to be saved and preserved is known as _____ .

PART TWO

(Answer any FOUR questions)

5. (a) Explain the usage of Firewall. Also, list the various types of firewalls and its working.

   (b) Explain various types of network topologies along with its advantages and disadvantages.

   (8+7)

6. (a) Differentiate the following :

   (i) Dynamic websites versus Static websites.

   (ii) URL versus IP address.

   (b) Explain the usage and working of web server in detail.

   (c) What is encryption ? What are encryption schemes ? Differentiate between Private Key Cryptography and Public Key Cryptography.

   (5+5+5)

7. (a) What is MIME ? How does it help in sending binary data via E-mail message ?

   (b) Write a HTML program to display a table with 5 rows and 4 columns. Provide appropriate heading to the form.

   (c) Differentiate classful and classless addressing.

   (5+5+5)

8. (a) What is an E-mail ? Explain about E-mail protocols – SMTP, POP3 and IMAP.

   (b) What is an IP address ? Explain the various classes of IP address. Also, differentiate between static and dynamic IP address. Which is better static or dynamic IP address ?

   (7+8)

9. Write short notes on **any three** of the following :

   (a) TELNET

   (b) FTP

   (c) Wireless Networking

   (d) UDP

   (5+5+5)

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SPACE FOR ROUGH WORK