A2-R4 : INTERNET TECHNOLOGY & 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 सकते हैं।	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 हैं तथा **भाग दो** ''व्यक्तिपरक'' प्रकार का है और इसके कुल अंक 60 हैं।	**PART ONE** is Objective type and carries 40 Marks. **PART TWO** is Subjective type and carries 60 Marks.
भाग एक के उत्तर, इस प्रश्न-पत्र के साथ दी गई **ओएमआर उत्तर-पुस्तिका** पर, उसमें दिये गए अनुदेशों के अनुसार 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, supplied with the Question Paper, as per the instructions contained therein. **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=10)

1.1 Which is the first Internet search engine ?

(A) Google   (B) Archie

(C) Altavista   (D) WAIS

1.2 Who is making the Web standards ?

(A) Mozilla

(B) Microsoft

(C) The World Wide Web Consortium

(D) NVDIA

1.3 To set up the window to capture all Click events, we use which of the following Statement ?

(A) window.captureEvents (Event.CLICK);

(B) window.handleEvents (Event.CLICK);

(C) window.routeEvents (Event. CLICK);

(D) window.raiseEvents (Event.CLICK)

1.4 If you want to align text to the right side of a block element in a cascading style sheet (CSS) then which of the following property would you use ?

(A) Right align   (B) Justify

(C) Left align   (D) Text align

1.5 Routers operate at which layer :

(A) Network

(B) Physical

(C) Data Link

(D) Transport

1.6 Data communication system spanning states, countries, or the whole world is

(A) LAN

(B) WAN

(C) MAN

(D) None of the above

1.7 Expand WAN :

(A) World area network

(B) Wide area network

(C) Web area network

(D) None of the above

1.8 In TDM, slots are further divided into

(A) Seconds

(B) Frames

(C) Packets

(D) None of the above

1.9 Flow Control is performed at which of the following layer

(A) Network

(B) Physical

(C) Data Link

(D) None of the above

1.10 In the layer hierarchy as the data packet moves from the upper to the lower layers, headers are :

(A) Added

(B) Removed

(C) Rearranged

(D) Modified

2. **Each statement below is either TRUE or FALSE. Choose the most appropriate one and enter your choice in the "OMR" answer sheet supplied with the question paper, following instructions therein.**
(1x10=10)

2.1 A network interface card (NIC) is an expansion card or a PC Card that connects your computer to a network and provides the doorway for information to flow in and out.

2.2 A switch is a device that connects multiple computers into a network in which multiple Communications links can be in operation simultaneously.

2.3 A firewall is software and/or hardware that protects a computer or network from intruders.

2.4 A WAN covers a large geographic distance, such as a state, a country, or even the entire world.

2.5 A repeater is a device that receives a radio signal, strengthens it, and sends it on.

2.6 A computer network consists of five or more computers connected to one another.

2.7. In an instance method or a constructor, "this" is a reference to the current object.

2.8. The JRE deletes objects when it determines that they are no longer being used. This Process is called Garbage Collection.

2.9. HTML is not an encoding scheme which is used to create a web page.

2.10 MIME stands for Multipurpose Internet Mail Extensions.

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=10)

		X		Y
		X		**Y**
3.1		The structure or format of data is called	**A.**	Protocol
3.2		Communication between a computer and a keyboard involves	**B.**	Checksum
3.3		The first Network	**C.**	Simplex
3.4		A set of rules that governs data communication	**D.**	Syntax
3.5		Extensible Markup Language	**E.**	ARPANET
3.6		Does error 404 or Not Found error while accessing a URL mean	**F.**	XML
3.7		Summation operations is performed on the bits to check an error-detecting code	**G.**	Unreachable URL
3.8		An error-detecting code inserted as a field in a block of data to be transmitted is known as	**H.**	Frame check sequence
3.9		What protocol is used between E-Mail servers	**I.**	Bridge
3.10		Frames from one LAN can be transmitted to another LAN via the device	**J.**	SMTP
			K.	FTP
			L.	Router
			M.	Gateway

4. **Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Choose the most appropriate option; enter your choice in the "OMR" answer sheet supplied with the question paper, following instructions therein.** **(1x10=10)**

A.	3 layer	B.	Node	C.	Hardware
D.	Final	E.	Wireshark	F.	192.168.0.0 - 192.168.255.255
G.	Uniform resource locator	H.	Declaration	I.	@html
J.	@media	K.	@charset	L.	Comments
M.	Collection				

4.1 In CSS what does "color:red" can be called as _____.

4.2 An _____ rule can be used to define style rules for multiple media types in a single embedded style sheet.

4.3 A single _____ rule can be used in an external sheet to define character set encoding of the style rules and values.

4.4 An _____ rule is used to define a page block for printed styles.

4.5 URL stands for _____.

4.6 TCP / IP over internet is a _____ network model.

4.7 Each machine on a network is called a _____.

4.8 MAC is a property of computer _____.

4.9 Range for class C IP address is _____.

4.10 Encrypted data of sniffing can be read by tool/ software whose name is _____.

PART TWO

(Answer any FOUR questions)

5. (a) What are the stages and strategies required to develop a web project?

   (b) Write HTML code to develop a web page having two frames that divide the page into two equal rows and divide the first row into equal columns. Fill each of the different background color.

   (c) Explain Utility of Java as Internet Programming ? **(6+5+4)**

6. (a) Define the terms Web site, Web Page, Web server, URL and home page and also explain systems.

   (b) Differentiate between Web browser and Web Server. How does a web server work ? **(10+5)**

7. (a) List the protocols, devices and unit of data at each of TCP/IP layers.

   (b) What is Cryptography? Explain the difference between Private Key Cryptography and Public Key Cryptography.

   (c) What is network topology? What are the different types of network topology ? Discuss Mess topology. **(5+5+5)**

8. (a) Differentiate between applet and application.

   (b) Write an HTML form that accepts a student's name and rollno. Use JavaScript function to perform following validation.

   (i) Rollno field should receive only numeric data.

   (ii) Name field should not be empty and shall not exceed 20 characters in length. **(5+10)**

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

   (i) Difference between Server Side Scripting and Client Side Scripting

   (ii) Abstract class

   (iii) VB Script & Java Script

   (iv) Session Bean

   (v) Domain Name System(DNS) **(3x5)**

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SPACE FOR ROUGH WORK