

## 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: \_\_\_\_\_; परीक्षार्थी के हस्ताक्षर: \_\_\_\_\_  
Name of Candidate: \_\_\_\_\_; Signature of candidate: \_\_\_\_\_

### परीक्षार्थियों के लिए निर्देश:

### Instructions for Candidate:

कृपया प्रश्न-पुस्तिका, ओएमआर शीट एवं उत्तर-पुस्तिका में दिये गए निर्देशों को ध्यान पूर्वक 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 कर 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 <b>TWO PARTS</b> in this Module/Paper. <b>PART ONE</b> contains <b>FOUR</b> questions and <b>PART TWO</b> contains <b>FIVE</b> questions.
भाग एक "वैकल्पिक" प्रकार का है जिसके कुल अंक 40 हैं तथा भाग दो, "व्यक्तिपरक" प्रकार है और इसके कुल अंक 60 हैं।	<b>PART ONE</b> is Objective type and carries 40 Marks. <b>PART TWO</b> 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।	<b>PART ONE</b> is to be answered in the <b>OMR ANSWER SHEET</b> only, supplied with the question paper, as per the instructions contained therein. <b>PART ONE</b> is <b>NOT</b> to be answered in the answer book for <b>PART TWO</b> .
भाग एक के लिए अधिकतम समय सीमा एक घण्टा निर्धारित की गई है। भाग दो की उत्तर-पुस्तिका, भाग एक की उत्तर-पुस्तिका जमा करने के पश्चात 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 <b>PART ONE</b> is <b>ONE HOUR</b> . Answer book for <b>PART TWO</b> will be supplied at the table when the answer sheet for <b>PART ONE</b> is returned. However, candidates who complete <b>PART ONE</b> earlier than one hour, can collect the answer book for <b>PART TWO</b> immediately after handing over the answer sheet for <b>PART ONE</b> .
परीक्षार्थी, उपस्थिति-पत्रिका पर हस्ताक्षर किए बिना अथवा अपनी उत्तर-पुस्तिका, निरीक्षक को सौंपे बिना, परीक्षा हॉल नहीं छोड़ सकता है। 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 or handing over his 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 पश्चात एवं उत्तर देने से पहले उम्मीदवार यह जाँच कर यह सुनिश्चित कर ले कि प्रश्न-पुस्तिका प्रत्येक दृष्टि से संपूर्ण है।	After receiving the instruction to open the booklet and before answering the questions, the candidate should ensure that the Question booklet is complete in all respect.
नोट: यदि हिन्दी संस्करण में कोई त्रुटि / विसंगति पाई जाती है, तो उस अवस्था में अंग्रेजी संस्करण ही मान्य होगा। Note: In case of any discrepancy found in Hindi language, English version will be treated as final.	

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 Correct HTML Tag for largest heading:  
A) <head>  
B) <h6>  
C) <heading>  
D) <h1>
- 1.2 **www** is based on which model?  
A) local-server  
B) client-server  
C) 3-tier  
D) None of the above
- 1.3 The system that translates an IP address into an easier to remember name is the  
A) Packet switching  
B) DNS  
C) Domain numbering system  
D) None of the above
- 1.4 In an email address [abc@dsdu.com](mailto:abc@dsdu.com), dsdu is the  
A) host computer in a business with the name dsdu  
B) host computer in a commercial domain  
C) client computer in a commercial business  
D) client computer in a commercial domain
- 1.5 The way in which information is transmitted to multiple internet connected devices is called  
A) Internet connectivity  
B) IP address  
C) multicasting  
D) multitasking
- 1.6 What protocol does PPP use to identify the Network layer protocol?  
A) NCP  
B) ISDN  
C) LCP  
D) HDLC
- 1.7 How many broadcast domains are created when you segment a network with a 12-port switch?  
A) 1  
B) 2  
C) 5  
D) 12

- 1.8 Which class of IP address has the most host addresses available by default?  
A) A  
B) B  
C) C  
D) None of the above

- 1.9 What is the correct html for adding a background color?  
A) <background color="yellow">  
B) <body color="yellow">  
C) <body bgcolor="yellow">  
D) <body bg="yellow">

- 1.10 Physical addresses will change from  
A) Point-to-point  
B) hop to hop  
C) sender to receiver  
D) frame to frame

**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)**

- 2.1 RSA is a public key cryptographic algorithm. In case one loses the private key, it is possible to reconstruct it from the public key.
- 2.2 Today Twisted Pair cable is the media of choice for backbone networks.
- 2.3 Alice uses her private key to authenticate herself to Bob.
- 2.4 Client-side scripts can perform many functions such as data validation and provide interactive feedback to the user.
- 2.5 Every host implements the transport layer.
- 2.6 The standard protocol of the Internet is Ethernet.
- 2.7 In a peer-to-peer network, any client computer can also be a server.
- 2.8 A hub connects two different LANs.
- 2.9 The advantage of packet-switching over circuit-switching is more pronounced for bursty traffic than for smooth traffic.
- 2.10 HTML is a protocol to describe web content.

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	Doing business electronically	A.	IP Protocol
3.2	End-to-end flow control	B.	Simplex
3.3	Keeps Digital Pests and hackers Out	C.	POP
3.4	One to one communication in one direction only	D.	ATM
3.5	Provides Best effort delivery service for transmission but does not guaranteed delivery of data	E.	E-commerce
3.6	User can synchronize their email among multiple devices	F.	ISDN
3.7	Character Stuffing	G.	IMAP
3.8	All nodes connected to a central switch	H.	SLIP
3.9	Cell Switching	I.	Transport layer
3.10	Digital transmission of voice, video, data, and services over the traditional circuits of the PSTN	J.	Firewall
		K.	PPP
		L.	Star
		M.	Mesh

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)

A.	Port	B.	Half duplex	C.	Integrity
D.	POP	E.	Tree	F.	Confidentiality
G.	IMAP	H.	Broadcast	I.	Frame
J.	Mesh	K.	MIME	L.	Telnet
M.	Data Link Layer				

- 4.1 Hub is a \_\_\_\_\_ device.
- 4.2 \_\_\_\_\_ is an Internet standard that extends the format of email to support Text other than ASCII, Non-text attachments etc
- 4.3 The \_\_\_\_\_ layer of OSI model can use the trailer of the frame for error detection.
- 4.4 To deliver a message to the correct application program running on the host, the \_\_\_\_\_ address must be consulted
- 4.5 In a \_\_\_\_\_ topology, if there are n devices in a network, each device has n-1 ports for cables.
- 4.6 \_\_\_\_\_ is the unit of data at data link layer
- 4.7 Communication circuit that transmit data in both directions but not at same time is \_\_\_\_\_
- 4.8 \_\_\_\_\_ simply downloads email to your computer, and usually (but not always) deletes the email from the remote server
- 4.9 \_\_\_\_\_ is an underlying TCP/IP protocol for accessing remote computers.
- 4.10 \_\_\_\_\_ ensures that information can only be accessed or modified by those authorized to do so.

**PART TWO**  
(Answer any FOUR questions)

**5.**

- a) Create an HTML Page to display the following table:

First Name	Last Name	Points
Eve	Jackson	94
John	Doe	80
Adam	Johnson	67
Jill	Smith	50

b)

Illustrate the Difference between:

- i) Slip Vs PPP protocol.
- ii) Peer to peer Vs Client server
- iii) Star Vs Ring Topology
- iv) LAN Vs MAN
- v) Private Key Vs Public Key Encryption

**(5+10)**

**6.**

- a) What is MIME? Explain.
- b) Explain what is URL along with its parts?
- c) What are the different types of e-Commerce available in internet?

**(5+5+5)**

**7.**

- a) What is multicasting? Which IP Address class and Protocol is used for Multicasting?
- b) Create a hyperlink in html which when clicked links to [www.google.com](http://www.google.com) in a new window.
- c) What is web hosting & web publishing?

**(5+5+5)**

**8.**

- a) What is outlook Express? How is it used?
- b) How can the contents of an email be protected?

**(6+9)**

**9.**

- a) What is ISDN? Elaborate upon its services.
- b) What are Unicast broadcast addresses? Explain with examples.
- c) Highlight upon the role of DNS in Internet?

**(5+5+5)**

