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HS/XII/V/CT/Paper-V/21

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COMPUTER TECHNIQUE

(Vocational Stream)

(Computer Network)

(Theory)

Full Marks : 100

Time : 3 hours

The figures in the margin indicate full marks for the questions

General Instructions :

- (i) Write all the answers in the Answer Script.
- (ii) Attempt Part—A (Objective Questions) serially.
- (iii) Attempt all parts of a question together at one place.

(PART : A—OBJECTIVE)

(Marks : 50)

1. Fill in the blanks from the list of words/phrases given at the end : 1×20=20

(a) A _____ is a set of rules that governs the communications between computers on a network.

(b) A _____ is a network that confines to a relatively small area.

(2)

- (c) The Internet is an example of ____.
- (d) The Netscape Navigator is a popular ____.
- (e) Every machine in a network has a unique ____.
- (f) The data in network travels in the form of a ____.
- (g) We can amplify the signal using ____.
- (h) A ____ is a device that allows us to segment a large network into two smaller more efficient networks.
- (i) A ____ is a device that connects dissimilar networks.
- (j) Mobility is one of the advantages of ____ LAN.
- (k) ____ waves are widely used for short-range communication.
- (l) ____ is/are computer program(s) written by devious programmers and designed to replicate themselves and infect computers when triggered by a specific event.
- (m) ____ is a term used by some to mean 'a clever programmer'.
- (n) ____ are text file with small pices of data that are used to identify user computer on network.
- (o) A ____ topology is designed with each node connected directly to a central network hub or concentrator.

(3)

- (p) A _____ is a set of rules that governs the communications between computers on a network.
- (q) _____ is a hardware device that establishes connections of computing devices on wireless LAN with a fixed wired network.
- (r) _____ is a term used to describe the legal issues related to use of communication technology particularly the Internet.
- (s) _____ is a device that modulates an analog signal to digital and also demodulates an analog signal to digital and also demodulates a digital signal to analog.
- (t) The _____ provides the physical connection between the network and the computer workstation.

List of phrases/words :

Tree	WAP	packet	bridge
WAN	NIC	gateway	Hacker
Virus	IP address	Modem	Router
Cyber law	star	TCP/IP	Infrared
Topology	Cookies	protocol	MAN
repeater	host	LAN	browser
wireless	MAC	node	server

(4)

2. State whether the following statements are *True* or *False* : 1×10=10

- (a) All modems are not direct-connect devices.
- (b) Optical fibers provide a very large bandwidth data link.
- (c) A dedicated server function only as a server and is not used as a client or workstation.
- (d) A dial-up connection is more reliable than a direct connection.
- (e) It is possible for two users to have the same e-mail address.
- (f) Bus topology shares a single channel on which all stations can receive and transmit data.
- (g) An octet is an 8-bit binary number.
- (h) A hub is used to boost the signal strength as it passes along a cable.
- (i) In HTML,
 is an example of container tag.
- (j) Wireless media are called guided media.

3. Choose and write the correct option : 1×5=5

- (a) Computer on Internet must
 - (i) be of the same type
 - (ii) be able to connect to one Internet server for the country
 - (iii) connect to a coaxial cable connector
 - (iv) use of same protocol

(5)

- (b) We can connect to the Internet through
- (i) direct access
 - (ii) dial-up IP
 - (iii) a connected LAN
 - (iv) All of the above
- (c) Which of the following topologies is least affected by removal/addition of workstations?
- (i) Ring
 - (ii) Star
 - (iii) Bus
 - (iv) None of the above
- (d) Which type of network should be installed to connect a small number of computers in the office building?
- (i) LAN
 - (ii) WAN
 - (iii) MAN
 - (iv) None of the above
- (e) Which of the following is a communication device?
- (i) ROM
 - (ii) Hub
 - (iii) Registers
 - (iv) SMPS

(6)

4. Write short notes on the following in not more than 4 to 5 sentences each (any *five*) : 3×5=15

- (a) Server
- (b) URL's
- (c) LAN
- (d) WWW
- (e) Tree topology
- (f) EDI
- (g) Booting

(PART : B—DESCRIPTIVE)

(Marks : 50)

Answer any **two** questions from each Section

SECTION—I

(**Network Technologies**)

5. (a) What are the different types of network? Explain.
- (b) What are the advantages of wireless network? Explain. 4+5=9
6. (a) What is a ring topology? Explain with diagram.
- (b) What are analog and digital transmissions? 5+4=9

(7)

7. Write short notes on the following (any *two*) : $4\frac{1}{2} \times 2 = 9$

- (a) Guided media
- (b) Fiber optic
- (c) Complexer

8. (a) What is a switch? Why is it used in a network? Explain.

(b) What is a file server? Explain its function. $5+4=9$

SECTION—II

(Network Environment)

9. (a) What is File Transfer Protocol (FTP)? Explain.

(b) What are cookies? Explain. $5+4=9$

10. (a) What are the security measures in a network to present?

(b) What are the important steps in a network to prevent from intruders? Explain. $3+6=9$

11. Write short notes on the following : $4\frac{1}{2} + 4\frac{1}{2} = 9$

- (a) Remote Login
- (b) Web Server

12. (a) Write a short note on 'addressing in the Internet'.

(b) Explain Class A, Class B and Class C networking. $4+5=9$

(8)

SECTION—III

(Network Application)

- 13.** (a) What is a Web browser? Explain with example.
(b) Write a short note on HTML and its code types. 3+4=7
- 14.** (a) What is Internet explorer? Explain its importance.
(b) Write a short note on TCP/IP. 4+3=7
- 15.** Write short notes on the following : $3\frac{1}{2}+3\frac{1}{2}=7$
(a) ROUTERS
(b) TELNET

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