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COMPUTER TECHNIQUE

(Vocational Stream)

(Computer Network)

(Theory)

Paper : V

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 below : 1×20=20

 (a) A network of networks is known as _____.

 (b) In a network, a machine identified by unique address is called _____.

(**2**)

(c) The physical address assigned by NIC manufacturer is called _____ address.

(d) The _____ is a central connection point where all network cables are concentrated.

(e) A network having a span within a building is called a _____.

(f) The _____ is a network device that can connect the network segments based on the same protocol.

(g) The _____ is a network device that connects dissimilar network.

(h) The _____ topology has a central line and all nodes are connected to it.

(i) _____ is a protocol that allows to send / upload email message from local computer to an e-mail server.

(j) Wired networks communication media are called _____ media.

(k) A computer network that spans a relatively large geographical area is called _____.

(l) A network with a dedicated server is called a _____ network.

(m) A MAC address consumes _____ bytes _____ bits.

(n) _____ is a device that modulates an analog signal to digital and also demodulates a digital signal to analog.

(3)

(o) We can amplify the signal using ____.

(p) A ____ is a set of rules that controls the data communication.

(q) A ____ is the interconnection of LAN and MAN.

(r) ____ cable has a single copper conductor at its center.

(s) The bundle of data in a network travels in the form of a ____.

(t) The Google Chrome is a popular ____.

List of Words / Phrases

Modem	Hub	Repeater	Co-axial
Packet	Intranet	Web browser	HTML
Client/Server	LAN	MAC	WAN
PAN	IP address	Protocol	Bridge
6,48	Guided	SMTP	Workstation
Bus	Topology	Gateway	TCP/IP

2. State whether the following statements are *True* or *False* :

1×10=10

(a) Internet computers communicate through network.

(b) Internet Explorer is the name of ISP.

(c) A webpage is a collection of websites.

(d) It is possible for two users to have the same e-mail address.

(e) A hub is used to boost the signal strength as it passes along a cable.

(f) Firewall prevents the network from intruders.

(4)

(g) A fibre-optic cable may transmit pulses of laser light in an all-digital network.

(h) A dedicated server functions only as a server and is not used as a client or workstation.

(i) Analog signals can take on many values.

(j) A dial-up connection is more reliable than a direct connection.

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

(a) What is the use of bridge in a network?
     (i) To connect LANs
     (ii) To separate LANs
     (iii) To control network speed
     (iv) All of the above

(b) Each IP packet must contain
     (i) only source address
     (ii) only destination address
     (iii) source and destination addresses
     (iv) None of the above

(c) Which of the following is the smallest network?
     (i) WAN
     (ii) MAN
     (iii) PAN
     (iv) LAN

(d) Which type of transmission media is the least expensive to manufacture?

   (i) Co-axial cable

   (ii) Twisted-pair cable

  (iii) CAT cable

  (iv) Fibre-optic cable

(e) A device that forwards data packet from one network to another is called a

   (i) bridge

   (ii) router

  (iii) hub

  (iv) gateway

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

(a) URLs

(b) Cookies

(c) Software libraries

(d) Language processor

(e) V-sat

(f) Hubs

(g) Tree topologies

(**6**)

(PART : B—DESCRIPTIVE)

(*Marks* : 50)

Answer any *two* questions from each Section

SECTION—I

(**Network Technologies**)

5. *(a)* What are the major types of networks? Explain.   4

     (b) What are the components of a computer network? Explain.   5

6. *(a)* Differentiate among simplex, half-duplex and full-duplex modes of data transmission.   6

     (b) What are analog and digital transmissions?   3

7. *(a)* What is switch? Why is it used in a network? Explain.   5

     (b) What is a file server? Explain its functions.   4

8. Write short notes on the following (any *two*) :   4½×2=9

     (a) Fibre optic

     (b) NIC

     (c) Workstations

SECTION—II

(**Network Environment**)

9. *(a)* What are cookies? Explain.   4

   (b) What is DNS? Explain.   5

10. *(a)* What is file transfer protocols? Explain its advantages.   5

    (b) What is computer virus? What are the types of computer virus? Explain.   4

11. *(a)* What is TCP/IP? Explain the functions of each layer of TCP/IP.   3+4=7

    (b) What is TELNET?   2

12. *(a)* What is serial data transmission? What is parallel data transmission? Explain.   5

    (b) Write a short note on Remote Access Service.   4

SECTION—III

(**Network Application**)

13. What is HTML? What are container tag and empty tag?   2+5=7

14. *(a)* What is a facsimile? Explain. 3

(b) Write short notes on the following : 2+2=4

 (i) e-mail

 (ii) Intranet

15. *(a)* What is the addressing of Internet? Explain. 3

(b) Explain class—A and class—B IP addresses. 4

16. Write short notes on the following : 3½+3½=7

(a) Routers

(b) POP

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