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**HS/XII/V/CT/Paper-V/19**

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**COMPUTER TECHNIQUE**

( Vocational Stream )

Paper : V

**( 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 questions 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 network that confined to a relatively small area.
  - (b) A \_\_\_\_ is a set of rules that governs the communications between computers on a network.

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- (c) The Mozilla Firefox is a popular \_\_\_\_\_.
- (d) The Internet is an example of \_\_\_\_\_.
- (e) A \_\_\_\_\_ stands at the heart of most network.
- (f) In \_\_\_\_\_ switching, packets are stored at intermediate nodes.
- (g) A server is a computer that stores the network programs and shared \_\_\_\_\_ files that users can get access to.
- (h) \_\_\_\_\_ are collection points for wires that interconnect workstations and transmits messages out the single port to which the destination station is connected.
- (i) The mobility is one of the advantages of \_\_\_\_\_ LAN.
- (j) \_\_\_\_\_ are collection points for wires that interconnect workstations.
- (k) A \_\_\_\_\_ is computing device that makes decisions as to which route a piece of data will follow next.
- (l) A \_\_\_\_\_ is a component used to transfer data in terms of signals in the network.
- (m) A/An \_\_\_\_\_ is a device that provides a computer a dedicated connection to the network.

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- (n) A \_\_\_\_\_ is a connecting device between Local Area Network and Wide Area Network.
- (o) For a computer to be connected to a network, the computer must have a card known as the \_\_\_\_\_.
- (p) In a Star Topology, the central computer that has everything routed through it is called a(n) \_\_\_\_\_ computer.
- (q) To connect two similar LANs we use a device called a(n) \_\_\_\_\_.
- (r) \_\_\_\_\_ is a device converts the analog signals and vice versa.
- (s) \_\_\_\_\_ is the device which increases the strength of the signal in a network.
- (t) \_\_\_\_\_ ensures messages cannot be intercepted or read by anyone other than the authorized recipient.

List of phrases/words :

Browser	Medium	Hubs	Packets
Frame	NIC	MAN	Ethernet
Host	LAN	Wireless	Data
Guest	Network	Router	Client
Switch	Bridge	Protocol	Modem
Server	UPS	WAN	Repeater
Encryption	Node	HTML	Decode

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

- (a) LANs are arranged in star, bus or ring configurations.
- (b) All modems are direct connect devices.
- (c) Clients request services from service requesters.
- (d) An octet is an 8-bit binary number.
- (e) In HTML, <BR> is an example of container tag.
- (f) The FACE attribute in HTML of the FONT element lets us select the font in which the text will be displayed.
- (g) “.wav”, is an extension of graphics file format.
- (h) ‘Telnet’ is a popular Web browser.
- (i) Wireless media are called unguided media.
- (j) A hub is used to boost the signal strength as it passes along a cable.

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

(a) Which of the following is a communication device?

(i) SMPS

(ii) SWITCH

(iii) RAM

(iv) UPS

(b) What 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

(c) A large number of computers in a wide geographical area can be efficiently connected using

(i) twisted pair lines

(ii) co-axial cables

(iii) communications satellites

(iv) None of the above

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(d) Which layer (OSI model) is responsible for congestion control?

- (i) Network layer
- (ii) Data link layer
- (iii) Transport layer
- (iv) Application layer

(e) Which of the following is not a communication device?

- (i) NIC
- (ii) UPS
- (iii) MODEM
- (iv) None of the above

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

- (a) Bluetooth
- (b) Hubs
- (c) Telnet
- (d) Domain name
- (e) HTTP
- (f) URLs
- (g) OSS
- (h) WWW

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( PART : B—DESCRIPTIVE )

( Marks : 50 )

Answer *any two* questions from each Section

SECTION—I

( **Network Technologies** )

5. (a) What are the advantages and disadvantages of star and ring topologies? 5  
(b) What is a private network? Explain with example. 4
6. (a) Write a short note on VSAT. 5  
(b) What are the advantages of wireless LANs? Explain. 4
7. Write notes on the following (any *two*) :  $4\frac{1}{2} \times 2 = 9$   
(a) Unguided media  
(b) Routers  
(c) Fibre optic cable  
(d) Complexer
8. (a) Explain the 'frame relay' in WAN technologies. 4  
(b) What is bridge? What are its functions? Explain.  $2+3=5$

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SECTION—II

( Network Environment )

9. (a) Write a short note on 'addressing in the Internet'. 4  
(b) Explain class A, class B and class C networks. 5
10. (a) Write a short note on Remote Access Server. 6  
(b) What is cookie? Explain. 3
11. (a) What are the security measures in a network? 3  
(b) What are the important steps in a network to present from intruders? Explain. 6
12. Write short notes on the following :  $4\frac{1}{2}+4\frac{1}{2}=9$   
(a) Remote login  
(b) Web server

SECTION—III

( Network Application )

13. (a) What is a Web browser? Explain with example. 3  
(b) Write a short note on HTML and its code types. 4
14. Write short notes on the following :  $3\frac{1}{2}+3\frac{1}{2}=7$   
(a) FTP  
(b) EDI
15. (a) What is Internet explorer? Explain its important. 4  
(b) Write a short note on Archie. 3

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