22417

24225

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following : **10**

(a) State features of Nos.

(b) List two advantages and two disadvantages of Bridge.

(c) Give the function of transport layer.

(d) List four benefits of computer network.

(e) List any four applications layer protocol.

(f) Define IP address. State IP address classes.

(g) Draw following topology with six host :

(i) Star (ii) Ring

2. Attempt any THREE of the following : **12**

(a) Compare coaxial cable and fiber optics cable (any 4 points).

(b) Explain functions of session layer and application layer of OSI model.

(c) Draw TCP/IP reference model. Write the functions of data link and network layer.

(d) Explain UDP protocol of TCP/IP model.

3. Attempt any THREE of the following : **12**

(a) Explain classification of network based on transmission technology.

(b) Explain gateways with diagram. List functions of gateways.

(c) Describe major functions of transport layer in TCP/IP model.

(d) Explain ARP and RARP protocol.

4. Attempt any THREE of the following : **12**

(a) Compare LAN, MAN, WAN with respective definitions, speed, distance, ownership and example.

(b) Define HUB. Explain different types of HUB.

(c) Describe the concept of data encapsulation.

(d) What is subnetting in IP network ? Explain with suitable example.

(e) List the classifying network component role.

5. Attempt any TWO of the following : **12**

(a) What is DNS ? Describe concept of DNS.

(b) Explain in detail packet format of IPV4.

(c) Differentiate between Peer to Peer, client server and distributed modes of computing (any four points).

6. Attempt any TWO of the following : **12**

(a) Enlist stepwise procedure for following :

(i) Share the scanner within two computer.

(ii) Share the file within two computer.

(b) Design a network of class B with network address 148.10.0.0 with two subnets. State subnet mask used and subnet address.

(c) Draw suitable network layout using star topology for computer lab with 12 host and a wireless printer. List all components in the layout.
