17429

11718

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : *(1)* ***All*** *questions are* ***compulsory****.*
(2) Illustrate your answers with neat sketches ***wherever*** *necessary.*
(3) Figures to the ***right*** *indicate* ***full*** *marks.*
(4) Assume suitable data, if ***necessary****.*
(5) Mobile Phone, Pager and any other Electronic Communication devices are ***not*** *permissible in Examination Hall.*

Marks

1. A) Attempt **any six** : **12**

a) Define computer network.
b) Give advantages of computer network.
c) What is hub ? Give types of hub.
d) What are the various network control devices ?
e) Why the network cable is twisted ?
f) State any two advantages of coaxial cable.
g) What is Layered Architecture ?
h) What is IP address ? State IP address classes.

B) Attempt **any two** : **8**

a) Explain computer network facilities in terms of centralized network management.
b) Describe router with neat and labeled diagram. State the situation under which router are necessary in network.
c) Explain the operation of modem.

2. Attempt **any four** : **16**

a) What is meant by file sharing and printer sharing ? How this can be achieved ?
b) State various network features. Explain any one in detail.
c) Define the following term :
1) Roaming 2) Soft hand off 3) GSM 4) AMPS
d) With neat diagram, explain satellite communication system.
e) Compare client server and peer to peer network.
f) Explain basic principles of mobile communication.

P.T.O.

Marks

3. Attempt **any four**: **16**

a) With neat diagram explain client server network along with its advantages and disadvantages.

b) Explain mesh topology with suitable diagram.

c) Describe the OSI model with neat diagram.

d) Describe data encapsulation.

e) State any four protocol associated with application layer of OSI model.

f) Differentiate between SLIP and PPP.

4. Attempt **any four**: **16**

a) Explain TCP/IP reference model with diagram.

b) Explain subnet masking.

c) Distinguish between guided and unguided transmission media.

d) Compare IPV_6 and IPV_4.

e) Write the names of layer that performs the following function in OSI.

1) Data encapsulation 2) Error detection 3) File transfer 4) Encoding

f) Distinguish between LAN and WAN.

5. Attempt **any four**: **16**

a) Explain RARP and ICMP.

b) Describe repeater. State the situation under which repeater are necessary in network.

c) Explain microwave link with diagram.

d) Compare hub and switch.

e) Explain structure of IP frame header.

f) Draw and explain working of bridges.

6. Attempt **any two**: **16**

a) Explain working of data link layer and network layer of OSI model.

b) What is ARP ? Explain function of ARP.

c) Describe advantages and disadvantages of optical fibre cable.