11819

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) *Write any special instructions if any.*

Marks

1. Solve **any 10** : **(10×2=20)**

   1) Write any two characteristics of LAN.

   2) Define packet.

   3) Define network topology.

   4) State two advantages of star topology.

   5) What is modem ?

   6) Identify switches and state in which layer of OSI reference model they operate.

   7) State any two applications of microwave communication.

   8) Enlist any four communication bands for unguided media with their frequency range.

   9) State two disadvantages of optical fiber.

   10) Define Wi-Fi.

   11) Define protocol.

   12) Enlist layers of OSI reference model.

   13) What is subnet masking ?

   14) State the IP address classes.

2. Solve **any four** : **(4×4=16)**

   a) Explain classification of computer network.

   b) Explain benefits of computer network.

   c) Explain the working of ring topology with neat sketch.

   d) Describe the characteristics of satellite microwave transmission.

   e) Describe the functions of presentation layer.

   f) Compare TCP and UDP.

P.T.O.

Marks

3. Solve **any four** :   (4×4=16)

   a) Describe features of application servers and mail servers.

   b) Compare Hub and switch.

   c) Explain the bands in cellular telephony.

   d) Draw and explain unshielded twisted pair cable.

   e) Explain data link layer in detail.

   f) Compare IPv4 and IPv6.

4. Solve **any four** :   (4×4=16)

   a) State any 4 advantages of peer to peer network over client/server network.

   b) State whether bus is active or passive network. Justify.

   c) Describe light sources for fiber.

   d) Explain network layer in detail.

   e) Explain the concept of data encapsulation.

   f) Explain structure of IP frame header.

5. Solve **any four** :   (4×4=16)

   a) Explain tree topology with neat diagram.

   b) Explain Bluetooth protocol architecture.

   c) Write a note on SLIP and PPP.

   d) What is segmentation and reassembly.

   e) Explain the term Domain Name Space.

   f) Explain the principle of FTP.

6. Solve **any two** :   (2×8=16)

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

   b) What is gateway ? Explain and state its operation.

   c) Compare OSI and TCP/IP.

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