17430

15162

3 Hours / 100 Marks   Seat No.

Marks

1. **(A) Attempt any SIX of the following :**   **12**

   (a) Define Multiplexing.

   (b) List two services of IEEE 802.11.

   (c) Define error.

   (d) Draw diagram of star topology.

   (e) List types of wireless media.

   (f) Draw diagram of piconet.

   (g) Define packets.

   (h) List four commands of SMTP.

   (B) Attempt any TWO of the following :   **08**

   (a) Give difference between FDM & TDM (4 points).

   (b) Give difference between SLIP and PPP (4 points).

   (c) Describe TCP & UDP with respect to their four differences.

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2. **Attempt any FOUR of the following :** 16

   (a) Draw the components of data communication system and state the function of each component.

   (b) Give difference between twisted pair cable and co-axial cable. (4 points)

   (c) State two applications of Bluetooth network.

   (d) Give the name of layer from OSI model where following networking devices are operating (i) Router, (ii) Bridge, (iii) Hub, (iv) Gateway.

   (e) What is filtering in bridge ?

   (f) Define FTP. Describe working of FTP.

3. **Attempt any FOUR of the following :** 16

   (a) Give difference between digital signal and analog signal. (4 points)

   (b) Explain transmitting/Receiving Handoff operations.

   (c) Explain working of CSMA/CD.

   (d) What is internet working ? Why is it required ?

   (e) Explain leased line connection

   (f) Explain working of ICMP.

4. **Attempt any FOUR of the following :** 16

   (a) Explain Half duplex system and full duplex system with diagram.

   (b) Explain satellite communication with diagram.

   (c) What is connection – oriented service and connectionless service ?

   (d) Explain with neat labelled diagram TCP/IP reference model.

   (e) What is multicast routing ?

   (f) Explain RARP with neat diagram.

5. **Attempt any FOUR of the following :** 16

   (a) Explain two types of communication system. Give suitable examples.

   (b) What are routers ? Explain with diagram.

(c) Name four standard organization. Give its functions each.

(d) Explain ISO-OSI reference model with diagram.

(e) Explain Internal Architecture of ISP.

(f) Give the name of layer where following protocols are related / belong to

    (i) SMTP

    (ii) TCP-UDP

    (iii) IP

    (iv) ARPANET

6. Attempt any FOUR of the following :   **16**

(a) State the meaning of

    (i) Phase

    (ii) Frequency

    (iii) Amplitude

    (iv) Time period

(b) Explain ungulded (wireless) media.

(c) State two advantages and two disadvantages of Bus topology.

(d) Draw and explain TCP segment header format.

(e) Explain the internet topology.

(f) Explain IP addressing procedure in detail.

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