22414

23124

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) 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) List advantages of Computer Networks. (any two)

   b) Draw process of Data Communication.

   c) List Networking Topologies.

   d) State types of errors.

   e) Draw a neat labeled diagram of co-axial cable.

   f) Compare LRC and VRC.

   g) List any four networking connecting devices.

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

   a) Compare client-server and peer-to-peer networks.

   b) Draw a neat labeled diagram of twisted pair cable and state its types.

   c) Explain wireless LAN 802.11 architecture.

   d) Explain OSI reference model in detail.

Marks

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

    a) Draw and explain piconet bluetooth architecture.

    b) Explain satellite communication with the help of neat diagram.

    c) Compare circuit switching and packet-switching, consider following parameter orientation, flexibility, technology and layer.

    d) Explain the function of presentation layer and network layer.

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

    a) With suitable diagram describe

        i) STAR Topology

        ii) RING Topology

    b) Describe the various IP address classes with suitable example.

    c) Describe multiplexing technique.

    d) Compare IPV4 and IPV6 packet format.

    e) Differentiate between Hub and switch. (any four points)

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

    a) Explain modes of communication

        i) Simplex

        ii) Half-Duplex

        iii) Full-Duplex

    b) Draw and explain fiber-optic cable

    c) Explain SMTP, HTTP, ARP protocol in detail.

Marks

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

  a) Explain mobile generations.

    i)   1 G

    ii) 2 G

    iii) 3 G

    iv) 4 G

    v) 5 G

  b) Differentiate between OSI and TCP/IP network model.

  c) Explain wide Area Networks along with its advantages and disadvantages.

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