

22414

12425

03 Hours / 70 Marks

Seat No.

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- 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. Attempt any FIVE of the following :** **10**
- a) State benefits of computer network.
 - b) Classify computer network based on geography.
 - c) Draw neat diagram of UTP cable.
 - d) Define error. List types of errors.
 - e) Compare LRC and VRC (any Two points)
 - f) Define Network topology. State types of topologies.
 - g) Define:
 - i) Data Encapsulation
 - ii) Subnet

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Define Following terms:
 - i) Protocol
 - ii) Bandwidth
 - iii) Baud rate
 - iv) Computer Network
 - b) Draw and explain Fiber Optic cable with its types.
 - c) Explain Bluetooth architecture with neat diagram.
 - d) Explain classes of IPv4 address with it's range.
- 3. Attempt any THREE of the following :** **12**
- a) Define multiplexing. Explain Frequency Division multiplexing with neat diagram.
 - b) State and explain modes of communication with neat diagram.
 - c) Describe working of router with neat diagram. Explain types of routers.
 - d) State the layers at which the following protocol work:
 - i) SLIP
 - ii) IP
 - iii) SMTP
 - iv) UDP
- 4. Attempt any THREE of the following :** **12**
- a) Compare twisted pair cable, coaxial cable and optical fiber cable.
 - b) With suitable diagram describe TCP/IP Reference model.
 - c) Describe satellite communication with neat diagram.
 - d) Compare IPv4 and IPv6.
 - e) Demonstrate working of CRC with example.

- 5. Attempt any TWO of the following :** **12**
- a) Compare peer to peer network and Client server network.
 - b) Describe working Principle of packet switching and circuit switching techniques with neat diagram.
 - c) Compare OSI Reference model and TCP/IP Reference model.
- 6. Attempt any TWO of the following :** **12**
- a) Describe following terms:
 - i) Wireless LAN
 - ii) Mobile Generations
 - b) Explain functions of Physical layer and Presentation layer of OSI reference model.
 - c) With Suitable diagram describe:
 - i) Star Topology
 - ii) Bus Topology
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