

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

- 1 a. Describe ISO-OSI reference model of computer network. Discuss the function of each layer. (10 Marks)
- b. Explain the operation of ADSL using multitone modulation with a neat diagram. (06 Marks)
- c. List different types of addressing in TCP/IP. Explain any one type of addressing with suitable example. (04 Marks)
- 2 a. What is framing? Explain bit and character stuffing with help of example. (06 Marks)
- b. Explain different types of HDLC frames. (06 Marks)
- c. Explain design of stop and wait automatic repeat frames for a noisy channel. (08 Marks)
- 3 a. With a flow diagram, explain 1-persistent, P-Persistent and non-persistent MAC procedures. (06 Marks)
- b. Discuss with an example CDMA channelization protocol. (08 Marks)
- c. Explain Token passing controlled access technique. (06 Marks)
- 4 a. Explain IEEE802.3 MAC frame format. (06 Marks)
- b. Compare and contrast standard, fast and Gigabit Ethernet. (06 Marks)
- c. Explain in detail IEEE 802.11 MAC protocol. (08 Marks)
- PART - B**
- 5 a. Discuss different inter connecting devices on the basis of the layers they operate. (08 Marks)
- b. Explain bus back bone and star back bone networks. (04 Marks)
- c. What are virtual LAN's? What is the basis for membership in VLAN? Enumerate advantages of having VLAN's. (08 Marks)
- 6 a. Compare between IPv4 and IPv6 packet headers along with extension headers. (08 Marks)
- b. Discuss three strategies proposed by IETF to help the transition between IPv4 and IPv6. (08 Marks)
- c. Write short notes on logical addressing. (04 Marks)
- 7 Write short notes:  
 (i) Forwarding techniques.  
 (ii) Routing Information Protocol.(RIP)  
 (iii) Border Gateway Protocol (BGP).  
 (iv) Multicasting distance vector routing protocol (DVMRP) (20 Marks)
- 8 a. Explain TCP and UDP datagram. (12 Marks)
- b. Describe TCP connection establishment using three way handshakes. (08 Marks)

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**PART - A**

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

Time: 3 hrs. Max. Marks:100

### Computer Communication Networks

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019

10EC/TE71

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