

Code: EC6T5

**III B.Tech-II Semester–Regular/Supplementary Examinations
March 2020**

**COMPUTER NETWORKS
(ELECTRONICS & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

- a) How many layers are there in OSI reference model? List them.
- b) Make a list of activities that you do every day in which computer networks are used.
- c) Define cyclic redundancy check.
- d) There are two types of data transfer modes defined by HDLC. What are they?
- e) Differentiate between Virtual Circuits and Datagram subnets.
- f) What is meant by flooding?
- g) Draw UDP header format.
- h) What are the applications of TCP?
- i) Define World Wide Web.
- j) What is meant by Video on demand?
- k) What is the Hamming distance between 001111 and 010011?

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) With neat diagrams discuss about various network topologies. 8 M

b) Compare and contrast a circuit-switched network and a packet switched network. 8 M

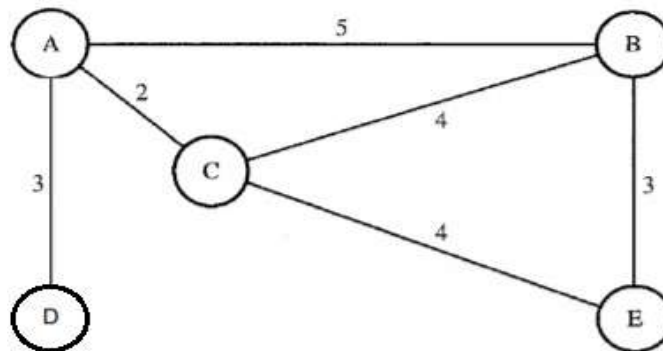
3. a) Draw CRC encoder and decoder for CRC code with (7,4), and also explain how CRC design works for the following examples. 8 M

i) Given data word = " 1 0 0 1 "

ii) Generator (Divisor)= "1 0 1 1 "

b) Explain the purpose of slotted ALOHA with a neat diagram. 8 M

4. a) Explain Dijkstra's algorithm and calculate shortest path from Node A to Node E in the given graph. 8 M



b) Write about Congestion Control algorithms. 8 M

5. a) Outline about Transport Layer services in detail. 8 M
- b) Explain about the connection management in TCP protocol. 8 M
6. a) Illustrate the importance of Domain Name System in Application Layer. 8 M
- b) Explain about Architecture and Services of Electronic Mail. 8 M