Total No. of Questions : 08

M.Tech. (ECE) EL-III (2018 Batch) (Sem.–2)
VOICE AND DATA NETWORKS
Subject Code : MTEC-PE3D-18
M.Code : 76264

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWELVE marks.

1. a) List and explain the requirements that influence the network design.

    b) Define discrete time Markov chain. Also explain its important properties.

2. Compare circuit-switching, message switching and packet switching methods, using timing diagram.

3. a) What is CIDR? What is aggregated route of the following routes :

     X.Y.128/24, X.Y.129/24, X.Y.130/24 and X.Y.135/24?

    b) Show the IPv6 header and describe the significance of various fields.

4. Write a detailed note on congestion avoidance mechanisms used in TCP.

5. Provide the following parameter values for each of the network classes A, B and C. Be sure to consider any special or reserved addresses in your calculations :

    a) Number of bits in network portion of the address.

    b) Number of bits in the host portion of the address.

    c) Number of distinct networks allowed.

    d) Number of distinct hosts per network allowed.

    e) Integer range of first octet.

6. Explain in detail about the steps involved in the routing process of a packet in a network.

7. a) Describe the format of UDP header and UDP message queue.

    b) Explain different end-to-end issues in the TCP protocol.

    c) Write a short note on reliable and order delivery .

8. Explain the implementation of RED algorithm.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.