M.Tech. 1st Semester (CSE) CBCS Scheme

Examination, December–2018

DATA COMMUNICATION AND COMPUTER NETWORKS

Paper– MTCSE 21C1

Time allowed : 3 hours]   *[Maximum marks : 100*

Note: *Attempt five questions in all selecting one from each unit. Question No. 1 is compulsory.*

1. Differentiate between following:

    (a) Packet, Circuit and Message Switching.

    (b) OSI and TCP / IP

    (c) IPV4 and IPV6

    (d) Monoalphabetic Ciphers and Polyalphabetic ciphers.   5×4=20

Unit–I

2. (a) Explain OSI model in detail.   10

    (b) Differentiate between Pure ALOHA and Slotted ALOHA.   10

3. (a) Explain various transmission modes in detail. 10

    (b) Explain the concept of CSMA/CD. How it is better than CSMA?   10

Unit–II

4. Discuss RIP and OSPF routing algorithms in detail. 20

5. (a) Explain the concept of Subnetting and Supernetting.   10

    (b) Write short notes on CIDR.   10

Unit–III

6. Discuss the causes of congestion and approaches to deal with it in detail.   20

7. (a) Explain DHCP operation in detail.   10

    (b) What are different TCP features and Services. 10

Unit–IV

8. (a) Discuss the issues involved in Network Layer Security.   10

    (b) What is SNMP? What are its basic components and their functionalities?   10

9. Write short note on:

    (a) Digital Signatures.   10

    (b) Firewall.   10