41811

May, 2019

M.Tech. (CSE) - Ist SEMESTER (Reappear)

Data Communication and Computer Networks

(MCSE -17-101)

Time : 3 Hours]   [Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*

2. *Answer any four questions from Part-B in detail.*

3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART–A

1. (a) Explain Frequency shift keying in brief.   (1.5)

    (b) If the data unit is 111111 and the divisor 1010 and remainder is 110, what is the dividend at receiver?
          (1.5)

    (c) Find network address of each: 129.6.8.4, 246.7.3.8
          (1.5)

(d) Differentiate between virtual circuit approach and datagram approach. (1.5)

(e) Consider the bit stream 10110000000001100. Encode it using NRZ and B8ZS. (1.5)

(f) Find class of each address: 227.34.78.7, 198.76.9.23 (1.5)

(g) Differentiate between serial and parallel transmission. Write down its applications. (1.5)

(h) Explain briefly SMTP. (1.5)

(i) Assume even parity, find the parity bit for 1001011, 0001100. (1.5)

(j) Explain briefly VPN. (1.5)

PART–B

2. Explain in detail OSI Reference Model. (15)

3. Discuss in detail Distance vector Routing with example. (15)

4. Explain ARP, RARP protocols in detail. (15)

5. (a) Discuss various types of Network topologies. Write down their advantages and disadvantages. (5)

   (b) Explain various switching methods. (10)

6. (a) Explain CSMA/CD. (5)

   (b) Describe in detail leaky bucket algorithm in detail. (10)

7. Write short notes on following :

   (a) CDMA.

   (b) Firewall.

   (c) Digital to digital encoding. (15)