Roll No. ..... Total No. of Pages : 2

Total No. of Questions : 09

B.Tech (CSE) (Sem.–5)

COMPUTER NETWORKS

Subject Code : CS-303

Paper ID : [A0465]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY.**
2. **Attempt any FOUR questions from SECTION-B.**
3. **Attempt any TWO questions from SECTION-C.**

SECTION-A **(10 × 2 = 20 Marks)**

1. (a) What is protocol?

(b) Compare synchronous and asynchronous TDM.

(c) Compare frequency modulation with amplitude modulation.

(d) What is composite signal?

(e) Compare STP and UTP.

(f) What are the limitations of NRZ encoding?

(g) Compare datagram and virtual circuits.

(h) What is DSL?

(i) What is Shannon Capacity?

(j) Encode the following bit stream with the Manchester and differential Manchester encoding
1110010101 .

SECTION-B **(4 × 5 = 20 Marks)**

2. How Time Division Switches are different from Space Division Switches? Explain with the help of diagram.

3. Generate the hamming code for the following data

   10110

4. Explain the generation of FDM signal with the help of diagram.

5. Explain the different types of wireless transmission.

6. Explain the working of Cable Modem.

SECTION-C **(2 × 10 = 20 Marks)**

7. Explain the working of FHSS Transmitter and Receiver and also derive output equations if BFSK modulation scheme is used.

8. Compare OSI and TCP/IP models.

9. How PCM signal is generated from analog signal?