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CS-501 (GS)
B.E. V Semester Examination, June 2020
Grading System (GS)
Data Communication
Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
     ii) All questions carry equal marks.

1. What is Data compression? Explain the various technique of data compression. Also explain its importance.

2. Four l-kbps connections are multiplexed together. A unit is 1 bit. Find.
   i) The duration of 1 bit before multiplexing
   ii) The transmission rate of the link
   iii) The duration of a time slot, and
   iv) The duration of a frame

3. a) Explain the concept of FDM, TDM and WDM multiplexing.
   b) Draw and explain circuit, message, packet and hybrid switching techniques.

4. Define bit rate. What is the bit rate of each of the following signal?
   i) Signal in which 1 bit lasts 0.001s
   ii) A signal in which 1 bit lasts 2 ms

5. Explain guided and unguided transmission media. Give suitable examples for both of them. Explain physical description, applications and transmission characteristics of the least expensive and most widely used guided transmission medium.

6. a) What are the three major components of a telephone network?
   b) What is dial-up Modem technology? List some of the common modem standards discussed in this chapter and give their data rates.

   OR

   What is network topology? Explain its types with the help of diagram. Also describe its merits and demerits.

7. Write short notes on any two:
   a) Hamming distance   b) Two and three layer switches
   c) Digital subscriber line   d) Radio waves

8. Explain the following terms : (Any two)
   i) BNC connector   ii) EIA-232
   iii) RJ-45   iv) Microwave communication

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