

1st Internal Examination of MSc CS/IT 2nd Semester Examination 2022

Paper: Data Communication and Computer Networks

Marks: 30

Time: 1hr 30 mins

1. Briefly explain different layers of OSI reference model. 7
2. Convert 101110010 into digital signal using following schemes (*any three*)- 3
 - a) NRL
 - b) RZ
 - c) Manchester encoding
 - d) Differential Manchester encoding
 - e) Bi-polar encoding
3. Briefly explain bit stuffing method of framing. Send the data 1001111111001111111100 using bit stuffing method. 2+1=3
4. Suppose the original message to be sent is 1101. What will be the extended message using hamming code method? Assume that the hamming code method uses even parity check scheme. 4
5. Briefly explain stop and wait ARQ protocol. 3
6. How does performance increase in Slotted Aloha than Pure Aloha? 2
7. Short notes on- 8
 - a) Fiber optics cable
 - b) Ring topology
 - c) Half duplex and Full Duplex communication
 - d) Simple parity check for error detection