**M.G.M’s COLLEGE OF ENGINEERING, NANDED**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**Assignment: 3**

**Subject: Data Communication Class: SE (CSE) - I**

1. **What do you mean by random access? Give its taxonomy. Give the flowchart for ALOHA protocol.**
2. **What is CSMA? Describe the behavior of persistent method.**
3. **Explain CRC encoder and decoder with suitable example.**
4. **Enlist the steps to calculate the checksum for error detection and error correction.**
5. **Using five bit sequence number, what is the maximum size of send and receive window for following protocols.**
6. **Stop and wait ARQ.**
7. **Go-Back-N protocol ARQ.**
8. **Selective repeat ARQ.**
9. **Explain 802.3 MAC layer frame format and frame length.**
10. **Explain the categories of standard Ethernet.**
11. **What is bit stuffing? Bit stuff the following data with flag pattern 01111111.**

**010001111111001111001100000001111111000000**

1. **Show the flow diagram for Stop and Wait ARQ protocol with following frame pattern.**
2. **Frame sent and acknowledged.**
3. **Frame lost and resent after timeout.**
4. **Frame sent, acknowledged, but acknowledgement is lost.**
5. **Give Selective Repeat ARQ sender side algorithm.**
6. **What is pipelining? Explain Send Window for Go-Back-N ARQ protocol.**
7. **Explain in short all channelization protocols.**
8. **Write note on Bluetooth.**
9. **Explain Backbone network.**
10. **Explain different standards for dial-up modem.**
11. **Calculate the checksum for the text “Best Luck”.**

**Ms. Neha P. Lanke**

**Subject In-charge**