

Data Communications

Line Encoding

Name:

Student ID:

1. Encode the following bit string using each encoding scheme. Draw the waveform for each case.

Data: 101011100010

- a) Not Return to Zero Inverted (NRZ-I)
- b) Manchester Encoding
- c) Differential Manchester Encoding
- d) Return to Zero (Polar RZ)

2. Encode the above data using QAM-8 (2 amplitude and 4 phase levels). Draw the constellation diagram and mention the bit sequence assigned to each signal element. Draw the waveform according to your constellation.