



Faculty of Electrical & Electronics Engineering
BEE 3413 Principles of Communication Systems

Name: _____

ID: _____

Section: _____

Date: _____

QUIZ 4

Mapping CO, PO, Domain, KI : CO1, PO1, C4

CO1: Analyze and differentiate various types of modulation and demodulation techniques.

PO2: Ability to acquire in-depth technical competency in specific engineering discipline

C4: Analysis

1100101001

Encode these binary number above using the following line coding schemes:

- (a) Unipolar NRZL
- (b) Polar NRZL
- (c) Polar NRZI
- (d) Polar RZ
- (e) Manchester encoding
- (f) Differential Manchester encoding
- (g) Bipolar Encoding - Alternately Mark Inversion

Bit rate: 50,000 bit/sec

Data elements per signal elements, $r : 1$

$V_p = \pm 5 \text{ V}$

Figure 1

[10 Marks]