Department of Electrical Engineering
Assignment 3
Date: 26/06/2020

Course Details

Course Title: _____ **Module:** _____
Instructor: _____ **Total Marks:** _____

Student Details

Name: _____ **Student ID:** _____

Q1		How to calculate Bandwidth from given transmission rate in bits per second? Give a definition of a Service and a Protocol. Use these definitions or any other discussion to illustrate the fundamental difference between a Service and a Protocol?
Q2		Discuss the use of formal analysis techniques for protocol. Comment on why such techniques are used in analyzing protocols and give some examples of the types of problems that such an analysis can reveal.
Q3		Draw the line code of sequence 010011011 using Polar Manchester. Draw the line code of sequence 01111011011100 using 2BIQ
Q4		An analogue signal has a bit rate of 8000 bps, and baud rate of 1000 baud. How many data elements are carried by each signal elements? How many signal elements do we need? In digital transmission the receiver clock is 0.3 percent faster than the sender clock. How many extra bits per second does the receiver receive if the data rate is 1Mbps.

Q5		A 7-bit hamming code is received as 1011011. Assume even parity and state whether the receive code is correct or wrong. If wrong locate the bit in error.

GOOD LUCK