

Daffodil International University
Department of Electrical and Electronic Engineering
Faculty of Engineering
Final Examination of Summer – 2021

Course Code – EEE 315

Course Title – Communication Engineering

Instructor's Initial: JAH

L/T: 2-3

Section: A

Shift: Eve

SET: A

Answer all the questions.

1	Suppose you have a message signal namely “DIU” and you have to transmit the signal via digital modulation. Transmit “D”, “I” and “U” in ASK, FSK and PSK respectively [CO-3].	5
2	Suppose in a communication channel of Bandwidth 4 KHz, a message will be sent via Pulse Code Modulation Technique. The message signal has 512 quantization levels. What will be the minimum bit rate of the channel? [CO-3].	5
3	What are the advantages of angular modulation over amplitude modulation? With mathematical explanation show that a frequency modulated wave can be generated from phase modulator [CO-3].	3+2
4.	Suppose in envelope detection modulation technique, the message signal is a sinusoidal signal with peak to peak value of 8 Volt and the carrier signal is a high frequency carrier signal with peak to peak value of 20 Volt. Sketch modulated signal with proper scaling of the amplitude of the signal and also calculate the efficiency [CO-3].	4+1
5.	Apply NRZ, RZ and Manchester line coding technique to transmit the number ‘212’ with proper diagram [CO-4].	5
6	Sketch the logic levels for the message ‘HT’ when it is transmitted in asynchronous mode with stop bit equal to one bit. Use ASCII code with even parity [CO-4].	5