Homework 2

University of Central Florida

Electrical and Computer Engineering

Digital Communications (EEL 4515C), Spring 2024

Issued: Mon, Feb 5, 2024 Due: Wed, Feb 14, 2024.

1. Solve problems 3.3-3, 3.3-6, in the textbook (5th edition)

(b)   
(c)   
(d)   
(e)   
(f)

1. For a linear system with transfer function

find the output signal *y*(*t*) of this system when the input signal is given by

Solve Problem 3.8-3 in the textbook (5th edition)

Justification: Since this is a random signal with equal probability of 1 or 0. We can assume that the average bit energy is ½ of 1 bit. Within the range of: , the shared area of the original signal and shifted version of itself decreases linearly.