Q.P. Code: 18EC0415 **R18**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year I Semester Supplementary Examinations December-2021

DIGITAL COMMUNICATIONS

(Electronics and Communication Engineering)

Time: 3 hours Max. Marks: 60

PART-A

(Answer all the Questions **5 x 2 = 10** Marks)

1	a	Define Decoding.	L1	2M
	b	What is Baseband binary data Transmission System?	L1	2M
	c	What is orthogonal basis function?	L1	2M
	d	What is the Bandwidth of BPSK?	L1	2M
	e	What is Parity check matrix?	L1	2M

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	Discuss the noise effects in Delta Modulation.	L2	5M
	b	Give brief note on Encoding, Decoding & Filtering.	L6	5M
		OR		
3	a	Draw the block diagram of digital communication system. Explain each block.	L4	5M
	b	Draw and explain the block diagram of regenerative repeaters.	L4	5M

UNIT-II

4	a	Describe the baseband M-array PAM Transmission system.	L2	5M
	b	Give a brief explanation on modified duo binary signaling scheme.	L4	5M
		OR		
5	a	What are the effects of ISI?	L2	5M
	b	Write a brief note on Eye pattern and construct the diagram.	L4	5M

UNIT-III

6	a	Explain the geometrical representation of signals.	L4	5M
	b	Draw the signal constellation diagrams for N=M=2.	L4	5M
		OR		
7	a	What is the concept of orthogonal basis function.	L2	5M
	b	Illustrate optimum receiver for AWGN channel.	L3	5M

UNIT-IV

8	a	Draw the block diagram of ASK transmitter and receiver and explain the operation.	L4	5M
	b	Derive an expression for probability of error in BFSK.	L6	5M
		OR		
9	a	Describe the generation and detection of BPSK.	L4	5M
	b	Discuss in brief about coherent detection of binary FSK.	L4	5M

UNIT-V

10	a	Explain the Convolutional Encoding and Decoding methods.	L2	5M
	b	Discuss in brief about sequential decoding of convolutional codes.	L4	5M
		OR		
11	a	Explain the concept of matrix representation of Linear block codes.	L2	5M
	b	Write short notes on Error detection and correction codes.	L2	5M

END