Q.P. Code: 19EC0448 **R19**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech II Year I Semester Regular Examinations Feb-2021

INTRODUCTION TO COMMUNICATION SYSTEMS

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Explain why we need modulation in communication systems.	6M
	b	Define low level AM wave generation with proper block diagram.	6M
		OR	
2	a	Describe the elements of communication systems.	6M
	b	Explain DSB-SC Amplitude modulation with mathematical equations and write about its applications.	6M

UNIT-II

3	a	Write about (i) Angle modulation (ii)Carrier signal in FM (iii) Carson's rule	6M
	b	Discuss and differentiate Narrowband & Wideband FM.	6M
		OR	
4	a	Explain different types of Angle modulation techniques with mathematical equations.	6M
	b	Define single tone FM with mathematical equation.	6M

UNIT-III

5	a	Write down about PAM with its mathematical analysis.	6M
	b	Define Pulse Time Modulation & classify it with proper diagram.	6M
		OR	
6	a	Write down about the different types of noises.	6M
	b	Write down about generation of PPM signal and mention its applications.	6M

UNIT-IV

7	a	Define PCM with proper block diagram and write about its applications.	6M
	b	Describe DPCM transmitter & receiver.	6M
		OR	
8	a	What is Quantization & Quantization Noise? Explain different types of quantizers.	6M
	b	What is delta modulation? Define it properly with diagram.	6M

UNIT-V

9	a	Explain a structure of a mobile cellular system.	6M
	b	What is 1G cellular system? Discuss about 2G & 2.5G cellular system.	6M
		OR	
10	a	Discuss and differentiate 3G and 4G cellular systems.	6M
	b	Write about (i) PSTN (ii)Hand-off strategy (iii) FDMA	6M

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