U. G. M. I. T, RAYAGADA

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGG

ACADEMIC LESSON PLAN FOR SUMMER SEMESTER-2022

NAME OF THE FACULT	Smita Patnaik	DEPT	ETC		
SEMESTER	5th	SUBJECT	Analog & Digital Communication		
NO. OF PERIODS PER WEEK	5	TOTAL PERIODS	75		
END SEMESTER EXAM	80	CLASS TEST	20		
TOTAL MARKS	100				

WEEK	PERIOD	UNIT/ CHAPTER	TOPIC TO BE COVERED
1st	1st	ELEMENTS OF COMMUNICATION SYSTEMS	Concept of elements of communication process
	2nd		Source of information and communication channels
	3rd		Classification of communication process
	4th		Modulation process
	5th		Need of modulation
2nd	1st		Classification of modulation process
	2nd		Analog and digital signal
	3rd		Concept of signal
	4th		Classification of signal
	5th		Bandwidth limitations
3rd	1st	AMPLITUDE MODULATION SYSTEM	Amplitude modulation
	2nd		Generation of amplitude modulation
	3rd		Linear diode detector and square law detector
	4th		Phase loked loop
	5th		Ssb signal
4th	1st		Ring modulator
	2nd		Synchronous detection
	3rd		Synchronous detection method
	4th		Concept of balanced modulator
	5th		Concept of balanced modulator
5th	1st		Expression of AM modulation
	2nd		DSB SC signal
	3rd		DSBSC signal
	4th		VSB modulation
	5th		VSB modulation
6th	1st	ANGLE MODULATION SYSTEM	Concept of angle modulation
	2nd		Types of angle modulation
	3rd		Basic principles of frequency modulation
	4th		Expression of FM modulation
	5th		Explain phase modulation
7th	1st		Difference between FM and PM modulation
	2nd		Working principles of amstrong method
	3rd		Working principles of forster seeley method
	4th		Working principles of foster seeley method
	5th		Block diagram of ratio detector
	1st		Classification of radio recever
	2nd		Definition of selectivity, sensitivity, noise and fidelity

8th	3rd	AM & FM TRANSMITTER & RECEIVER	working principles of AM transmitter
	4th		Concept of frequency convention
	5th		RF and IF amplifier
9th	1st		S/ N ratio
	2nd		Block diagram of superheterodyne radio recever
	3rd		Working of FM transmitter and recever
	4th	ANALOG TO DIGITAL CONVERSATION & PULSE MODULATION SYSTEM	Concept of sampling theorm
	5th		Nyquist rate and aliasing
10th	1st		Sampling techniques
	2nd		Generation and detection of PAM
	3rd		Generation and detection of PPM
	4th		Generation and detection of PWM
	5th		Quantization of signals
11th	1st		Quantization errors
	2nd		Generation and detection of PCM system
	3rd		Companding in PCM and Vocoder
	4th		Operation of time division multiplexing
	5th		Generation and detection of delta modulation
12th	1st		Block diagram of DPCM
	2nd		Detection of DPCM
	3rd		Comparison between PCM and DPCM
	4th		Comparison between DM and ADM
	5th		Application of pcm
13th	1st	DIGITAL MODULATION TECHNIQUES	Basic concepts of Multiplexing
	2nd		Difference between FDM and TDM
	3rd		Advantages of digital communications systems
	4th		Digital modulation technique
	5th		Generation AND Detection of ASK
14th	1st		Generation and detection of FSK
	2nd		Generation and detection of PSK
	3rd		Generation and detection of QPSK
	4th		Working of T1 carrier system
	5th		Spread spectrum and applications
15th	1st		Working principles of DS SS and FH SS
	2nd		Bit, Baud, symbol and channel capacity
	3rd		Application of different modulation schemes
	4th		Types of MODEM
	5th		Application of MODEM