GOVERNMENT POLYTECHNIC, NUAPADA

ELELECTRICAL /MECHANICAL /CIVIL ENGG.	Semester: 1ST	Name of the Teaching Faculty: UDAYA MEHER, LECT .IN ELECTRONICS
Subject: BASIC ELECTRONICS ENGINEERING	No. ofdays/per week classallotted:02	Semester From date: 15.10.2022 TO 31.01.2023 No.of Weeks:15
PRE-REQUISITE	Basic knowledge on electronics and its application in modern era.	
COURSEOUTCOMES	CO1: To be familiar with Electronic devices CO2: To be familiar with Electronic circuits CO3: To be familiar with communication system CO4: To be familiar with Electronic measuring instruments	

Week	Class Day	Theory/Practical Topics	DELIVERY METHOD
1ST	1ST	Basic Concept of Electronics and its application.	Whiteboard
	2ND	Basic Concept of Electron Emission & its types	Whiteboard
	3RD	Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only	Whiteboard
	4TH	Difference between Intrinsic & Extrinsic Semiconductor.	Whiteboard
2ND	1ST	Difference between vacuum tube & semiconductor.	Whiteboard
	2ND	Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)	Whiteboard
	3RD	Integrated circuits (I.C) & its advantages	Whiteboard
	4TH	**QUIZ&ASSIGNMENT-I**	
3RD	1ST	Rectifier & its uses	Whiteboard
	2ND	Principle of working of half wave rectifier	Whiteboard
	3RD	Principle of working of Full wave rectifier	Whiteboard
	4TH	Merits and demerits of half wave and full wave rectifier	Whiteboard
4TH	1ST	Functions of filters	Whiteboard
	2ND	classification of simple Filter circuit (Capacitor, choke input)	Whiteboard
	3RD	Working of D.C power supply system (unregulated) with help of block diagrams only	Whiteboard
	4TH	Working and function of transistor	Whiteboard
5TH	1ST	Different types of Transistor Configuration and state output and input current gain	Whiteboard
	2ND	Different types of Transistor Configuration and state output and input current gain	Whiteboard
	3RD	Relationship in CE,CB and CC configuration	Whiteboard
	4TH	Need of biasing	Whiteboard
6TH	1ST	Fixed biasing for CE configuration	Whiteboard
	2ND	Self biasing for CE configurtion	Whiteboard
	3RD	Voltage devider biasing for CE configuration	Whiteboard
	4TH	Concept of Amplifier	Lecturenotes
7TH	1ST	working principles of single phase CE amplifier	Whiteboard
	2ND	Electronic Oscillator and its classification	Whiteboard

	3RD	Electronic Oscillator and its classification	Whiteboard
	4TH	Working of Basic Oscillator with different elements through simple Block Diagram	Whiteboard
8TH	1ST	Working of Basic Oscillator with different elements through simple Block Diagram	Whiteboard
	2ND	**QUIZ&ASSIGNMENT-II**	Whiteboard
	3RD	Concept of Basic communication system	Whiteboard
	4TH	Explanation with the help of block diagram	Whiteboard
9TH	1ST	Concept of modulation and its application	Whiteboard
	2ND	Concept of demodulation and its application	Whiteboard
	3RD	Difference between modulation and demodulation and AM modulation	Whiteboard
	4TH	Frequency and phase modulation	Lecturenotes
10TH	1ST	Frequency and phase modulation	Whiteboard
	2ND	Comparison between the above three modulation	Whiteboard
	3RD	**QUIZ&ASSIGNMENT-III**	Whiteboard
	4TH	Concept of Transducer and sensor with their differences	Whiteboard
11TH	1ST	Different type of Transducers & concept of active and passive transducer	Whiteboard
	2ND	Working principle of photo emissive transducer	Whiteboard
	3RD	Working principle photoconductive transducer	Lecturenotes
	4TH	Working principle of photovoltaic transducer	Whiteboard
12TH	1ST	Working principle of photo emissive, photoconductive, photovoltaic transducer and its application	Whiteboard
	2ND	Multimeter and its applications	
	3RD	Analog and Digital Multimeter	Whiteboard
	4TH	Analog and Digital Multimeter and their differences	Whiteboard
13TH	1ST	Working principle of Multimeter with Basic Block diagram	Whiteboard
	2ND	CRO, working principle of CRO with simple Block diagram	Whiteboard
	3RD	CRO, working principle of CRO with simple Block diagram	Whiteboard
	4TH	**QUIZ&ASSIGNMENT-IV**	Lecturenotes
14TH	1ST	PROBLEM SOLVING	
	2ND	PROBLEM SOLVING	
	3RD	PREVIOUS YEAR QUESTIONS DISCUSSION	
	4TH	REVISION	
15TH	1ST	REVISION	
	2ND	REVISION	
	3RD	REVISION	
	4TH	REVISION	

LEARNINGRESOUCES:

1. Principles of Electronics by V.K Mehta and Rohit Mehta,S Chand Publication
2. Principles of Electronics by S.K. SAHADEV (Dhanpatrai Publication)