

LESSON PLAN FOR BASIC ELECTRONICS (TH 4b) (Summer-2023)

Discipline: Civil & Mechanical	Semester: 2nd	Name of the Teaching Faculty: P.Bhawani, Satyabrata Sahoo & Sasmita Sahoo
Subject: Basic Electronics (TH 4b)	No of Days /per week class allotted : 2	Semester From date: 20/03/2023-27/06/2023 No of Weeks: 15
Week	Class Day	Theory / Practical Topics
1st	1st	1. ELECTRONIC DEVICES (8) 1.1 Basic Concept of Electronics and its application.
	2nd	1.2 Basic Concept of Electron Emission & its types.
2nd	1st	1.3 Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.
	2nd	1.4 Difference between Intrinsic & Extrinsic Semiconductor.
3rd	1st	1.5 Difference between vacuum tube & semiconductor.
	2nd	1.6 Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)
4th	1st	Continue
	2nd	1.7 Integrated circuits (I.C) & its advantages.
5th	1st	2. ELECTRONIC CIRCUITS (9) 2.1 Rectifier & its uses.
	2nd	2.2 Principles of working of different types of Rectifiers with their merits and demerits
6th	1st	2.3 Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)
	2nd	2.4 Working of D.C power supply system (unregulated) with help of block diagrams only
7th	1st	2.5 Transistor, Different types of Transistor Configuration and state output and input current gain relationship in CE, CB and CC configuration(No mathematical derivation)
	2nd	2.6 Need of biasing and explain different types of biasing with circuit diagram.(only CE configuration)
8th	1st	2.7 Amplifiers(concept) , working principles of single phase CE amplifier
	2nd	2.8 Electronic Oscillator and its classification
9th	1st	2.9 Working of Basic Oscillator with different elements through simple Block Diagram
	2nd	3. COMMUNICATION SYSTEM (3) 3.1 Basic communication system (concept & explanation with help of Block diagram)
10th	1st	3.2 Concept of Modulation and Demodulation, Difference between them
	2nd	3.3 Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave (only concept, No mathematical Derivation)
11th	1st	4. TRANSDUCERS AND MEASURING INSTRUMENTS (10) 4.1 Concept of Transducer and sensor with their differences.
	2nd	4.2 Different type of Transducers & concept of active and passive transducer.
12th	1st	4.3 Working principle of photo emissive, photoconductive, photovoltaic transducer and its application
	2nd	Continue
13th	1st	4.4 Multimeter and its applications
	2nd	4.5 Analog and Digital Multimeter and their differences
14th	1st	4.6 Working principle of Multimeter with Basic Block diagram
	2nd	Continue
15th	1st	4.7 CRO, working principle of CRO with simple Block diagram
	2nd	Continue


 Signature of the faculty