

UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA**Academic Lesson Plan for 1st Semester – 2022 (Winter)**

Name of the teaching faculty: Miss. Dharitree Behera, PTGF Lecturer (Electrical)

Dept.: Department of Mathematics & Science

Semester : 1st

Subject : Theory 4B : Basic Electronics Engg.

No of Periods per week: 2,

Total Periods: 30,

End semester Exam.: 40Marks,

Class test (I.A.): 10 Marks,

Total Marks: 50 Marks

Week	Period	Unit/ Chapter	Topics to be Covered
1 ST	1 ST	Unit-1 ELECTRONIC DEVICES	Basic Concept of Electronics and its application
	2 ND		Basic Concept of Electron Emission & its types.
2 ND	1 ST		Classification of material according to electrical conductivity (Conductor, Semiconductor & Insulator) with respect to energy band diagram only.
	2 ND		Difference between Intrinsic & Extrinsic Semiconductor
3 RD	1 ST		Difference between vacuum tube & semiconductor
	2 ND		Principle of working and use of PN junction diode, Zener diode and Light Emitting Diode (LED)
4 TH	1 ST	Unit-2 ELECTRONIC CIRCUITS	Integrated circuits (I.C) & its advantages
	2 ND		Rectifier & its uses. Principles of working of different types of Rectifiers with their merits and demerits
5 TH	1 ST		Functions of filters and classification of simple Filter circuit (Capacitor, choke input and π)
	2 ND		Working of D.C power supply system (unregulated) with help of block diagram only
6 TH	1 ST		Transistor, Different types of Transistor Configuration and state output and input current gain relationship in CE, CB and CC configuration (No mathematical derivation)
	2 ND		Need of biasing and explain different types of biasing with circuit diagram. (only CE configuration)
	1 ST		Amplifiers (concept), working principles of single

7 TH			phase CE amplifier
	2 ND		Frequency response and gain verses bandwidth relation.
8 TH	1 ST		Electronic Oscillator and its classification
	2 ND		Working of Basic Oscillator with different elements through simple Block Diagram
9 TH	1 ST	Unit-3 COMMUNICA TION SYSTEM	Basic communication system (concept & explanation with help of Block diagram)
	2 ND		Concept of Modulation and Demodulation, Difference between them
10 TH	1 ST		Different types of Modulation (AM, FM & PM) based on signal, carrier wave and modulated wave (only concept, No mathematical Derivation)
	2 ND		Concept of Transducer and sensor with their difference
11 TH	1 ST	Unit-4 TRANSDUCERS AND MEASURING INSTRUMENTS	Concept of Transducer and sensor with their difference
	2 ND		Different type of Transducers & concept of active and passive transducer
12 TH	1 ST		Working principle of photo emissive, photoconductive, photovoltaic transducer and its application
	2 ND		Multimeter and its applications
13 TH	1 ST		Analog and Digital Multimeter and their difference
	2 ND		Working principle of Multimeter with Basic Block diagram
14 TH	1 ST		CRO, working principle of CRO with simple Block diagram
	2 ND		Revision of unit-1 & unit-2
15 TH	1 ST		Revision of unit-3 & unit-4
	2 ND		Previous year question discussion

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