

LESSON PLAN (WINTER-2023)

Discipline: Electrical		Semester:5 th Sem	Name of the Teaching Faculty: Mrs. Jayashree Mohanty (Sr. Lect. Electrical Engg)	
Subject: Electrical Engineering Material	Date	Theory Periods: 4P/Week	Semester From Date:-01.08.23	to Date:- 30.11.23 No. of Weeks:18
1st Week	01.08.23	1st	Conducting Materials Introduction	
	02.08.23	2nd	Resistivity, factors affecting resistivity	
	04.08.23	3rd	Classification of conducting materials into low-resistivity and high resistivity materials	
	05.08.23	4th	Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel)	
2nd Week	08.08.23	1st	Stranded conductors, Bundled conductors	
	09.08.23	2nd	Low resistivity copper alloys	
	11.08.23	3rd	High Resistivity Materials	
	12.08.23	4th	Their Applications(Tungsten, Carbon, Platinum, Mercury)	
3rd Week	16.08.23	1st	Superconductivity, Superconducting materials	
	18.08.23	2nd	Application of superconductor materials	
	19.08.23	3rd	Semiconducting Materials Introduction	
4th Week	22.08.23	1st	Semiconductors	
	23.08.23	2nd	Electron Energy and Energy Band Theory	
	25.08.23	3rd	Excitation of Atoms	
	26.08.23	4th	Insulators, Semiconductors and Conductors	
5th Week	29.08.23	1st	Semiconductor Materials	
	01.09.23	2nd	Covalent Bonds	
	02.09.23	3rd	Intrinsic Semiconductors, Extrinsic Semiconductors	
6th Week	05.09.23	1st	N-Type Materials, P-Type Materials	
	08.09.23	2nd	Minority and Majority Carriers	
	09.09.23	3rd	Semi-Conductor Materials	
7th Week	12.09.23	1st	Applications of Semiconductor materials, Rectifiers, Temperature-sensitive resistors or thermistors	
	13.09.23	2nd	Photoconductive cells, Photovoltaic cells	
	15.09.23	3rd	Varistors, Transistors	
	16.09.23	4th	Hall effect generators, Solar power	
8th Week	22.09.23	1st	Insulating Materials Introduction	
	23.09.23	2nd	General properties of Insulating Materials, Electrical properties, Visual properties, Mechanical properties	
9th Week	26.09.23	1st	Thermal properties, Chemical properties, Ageing	
	27.09.23	2nd	Insulating Materials – Classification, properties, applications, Introduction	
	30.09.23	3rd	Classification of insulating materials on the basis physical and chemical structure	

10th Week	03.10.23	1st	Insulating Gases,Introduction
	04.10.23	2nd	Commonly used insulating gases
	06.10.23	3rd	Dielectric Materials,Introduction
	07.10.23	4th	Dielectric Constant of Permittivity
11th Week	10.10.23	1st	Polarization,Dielectric Loss
	11.10.23	2nd	Electric Conductivity of Dielectrics and their Break Down
	13.10.23	3rd	Properties of Dielectrics
	14.10.23	4th	Applications of Dielectrics
12th Week	17.10.23	1st	Magnetic Materials Introduction
	18.10.23	2nd	Classification of Diamagnetism,Para magnetism and Ferromagnetism
	20.10.23	3rd	Magnetization Curve and Hysteresis
14th Week	31.10.23	1st	Eddy Currents,Curie Point,Magneto-striction
	01.11.23	2nd	Soft and Hard magnetic Materials (i)Soft magnetic materials (ii) Hard magnetic materials
	03.11.23	3rd	Assignment
	04.11.23	4th	Materials for Special Purposes Introduction
15th Week	07.11.23	1st	Structural Materials
	08.11.23	2nd	Protective Materials,Lead
	10.11.23	3rd	Steel tapes, wires and strips
	11.11.23	4th	Other Materials, Thermocouple materials
16th Week	14.11.23	1st	Bimetals
	15.11.23	2nd	Soldering Materials
	17.11.23	3rd	Fuse and Fuse materials
	18.11.23	4th	Dehydrating material.
17th Week	21.11.23	1st	Tutorial
	22.11.23	2nd	Tutorial
	24.11.23	3rd	Tutorial
	25.11.23	4th	Tutorial
18th Week	28.11.23	1st	Tutorial
	29.11.23	2nd	Tutorial

Mohanty
 31.07.2023
 (Sr. Lect. Elect)