KIIT POLYTECHNIC, BHUBANESWAR

LESSON PLAN

Session (2022-2023)

Discipline: ELECTRICAL ENGG.	**Semester:** 3rd , Winter/2022	**Name of the Teaching Faculty** Khusboo Parvin Lecturer **Email ID:** kparvinfel@kp.kiit.ac.in
Subject: Electrical Engg. Material **(EET-302)**	**No. of** **Days/Week:** 04	**Start Date:** 14/09/2022 **End Date:** 21/01/2023

Week	Class Day	Theory Topics
1st	1st	Introduction to atomic theory, inter atomic bonds.
	2nd	Introduction to resistivity, factor affecting resistivity.
	3rd	Classification of conducting materials.
	4th	Low resistivity material & its applications.
2nd	1st	High resistivity material & its applications.
	2nd	Superconductivity & its applications.
	3rd	Electron energy & energy band theory, excitation of atoms.
	4th	Semiconductor materials, covalent bonds.
3rd	1st	*Doubt Clearing class*
	2nd	Intrinsic & Extrinsic semiconductors.
	3rd	N-type & P-type materials, Minority & Majority materials
	4th	Minority & majority carriers.
4th	1st	Semi-conductors materials & application of semi- conductor materials
	2nd	Rectifier, Temp- sensitive resister or thermistor.
	3rd	Photo-conductive cell & photo-voltaic cell
	4th	*Doubt Clearing class*

5th	1st	*Assignment Evaluation &Class Test*
	2nd	*QUIZ Test-1*
	3rd	Varister & transistor
	4th	Hall- effect generator
6th	1st	Solar power.
	2nd	Introduction to general properties of insulating materials.
	3rd	General properties of Insulating Materials, Electrical properties, Visual properties, Mechanical properties.
	4th	Insulating materials classification, properties and applications
7th	1st	Insulating Gases, Introduction, Commonly used insulating gases
	2nd	Insulating Gases, Introduction, Commonly used insulating gases
	3rd	*Doubt Clearing class*
	4th	*Assignment Evaluation &Class Test*
8th	1st	Sf6 Insulating gases & its application
	2nd	Di-electric constant of permittivity
	3rd	Introduction to dielectric materials Polarization.
	4th	Properties of dielectric material.
9th	1st	Electric conductivity of dielectric and their break down.
	2nd	Polarization Dielectric loss
	3rd	Application of dielectrics material.
	4th	*Assignment Evaluation &Class Test*
10th	1st	Introduction to magnetic materials
	2nd	Classification of magnetic materials.
	3rd	*Doubt Clearing class*
	4th	Diamagnetism
11th	1st	Para magnetism
	2nd	Ferromagnetism.
	3rd	Explain Magnetization curve
	4th	Hysteresis curve.
12th	1st	Hysteresis losses.
	2nd	*Doubt Clearing class*
	3rd	*Assignment Evaluation &Class Test*
	4th	*QUIZ Test-1*

13th	1st	Curie point, Eddy current
	2nd	Magnetostriction.
	3rd	Soft magnetic materials
	4th	Hard magnetic material.
14th	1st	Introduction to structural materials, Protective materials lead, steel tape, wires & strips.
	2nd	Thermocouple materials, Fuse &fuse materials, Dehydrating materials.
	3rd	Bimetals materials, soldering materials
	4th	*Doubt Clearing class*
15th	1st	*Assignment Evaluation &Class Test*
	2nd	*Discussion of Previous year questions*
	3rd	*Discussion of Previous year questions*
	4th	*Discussion of Previous year questions*