

Dicipline: <u>Electrical Engineering</u>		Semester: <u>3rd</u>	Name of the Teaching Faculty: <u>Smitasree Jena</u>	
Subject: <u>Electrical Engineering Material - 1</u>		No of Days/Week Class Allotted: <u>4</u>	Semester From date: <u>15.09.22</u> To date: <u>12.01.23</u>	No. of Weeks: <u>15</u>
WEEK	Class Day	Theory Topics		
	1st	Classification of electrical engineering materials Introduction to conducting materials.		
	2nd	Resistivity & factors Affecting Resistivity		
	3rd	Classification of conducting materials into Low Resistivity & High Resistivity		
	4th	Low resistivity materials and their applications.		
	5th			
	1st	Standard of conductors, Bundled conductors		
	2nd	Low resistivity copper alloys & numerical Based on resistivity		
	3rd	High resistivity materials and their applications		
	4th	Superconductivity, superconducting materials.		
	5th			
	1st	Application of superconductor materials		
	2nd	numerical solving		
	3rd	Introduction to semiconductors.		
	4th	Electron energy and energy Band theory		
	5th			

WEEK	Class Day	Theory Topics
	1st	excitation of atoms, Insulators, semiconductors and conductors.
	2nd	semiconductor materials, constant Band
	3rd	Intrinsic semiconductors.
	4th	Extrinsic semiconductor.
	5th	
	1st	Minority and Majority carriers, Classification of semiconductor materials
	2nd	Applications of semiconductor materials
	3rd	Comparison Between p-type N-type semiconductors.
	4th	Comparison on conductor and semiconductor, units and dimensions.
	5th	
	1st	Introduction to Insulating material & properties.
	2nd	Electrical properties
	3rd	Factors affecting dielectric strength, dielectric constant, dielectric loss
	4th	Thermal properties & Mechanical properties
	5th	

Discipline:		Semester:	Name of the Teaching Faculty:	
Subject:	No of Days/Week Class Allotted: _____	Semester From date: _____ To _____ date _____	No. of Weeks:	
WEEK	Class Day	Theory Topics		
	1st	Chemical Properties, Ageing		
	2nd	Availability & characteristics of a ideal insulating.		
	3rd	Classification of Insulating		
	4th	Impregnated Fibrous Material & its application.		
	5th			
	1st	Non porous Material, Insulating boards.		
	2nd	Ceramic glass & mica products		
	3rd	Asbestos, Rubber, Plastics & Adhesives		
	4th	Insulating cables, commonly used insulating grades chemical structure.		
	5th			
	1st	Class test		
	2nd	Introduction to dielectric material		
	3rd	Polarization & its types		
	4th	Dielectric loss, types of dielectric		
	5th			

WEEK	Class Day	Theory Topics
	1st	Electrical conductivity of defects
	2nd	Properties of defects,
	3rd	Comparison Between defects & Insulating.
	4th	Introduction magnetic materials class - features of magnetic materials.
	5th	
	1st	Applications of defects,
	2nd	Class test question discussion.
	3rd	magnetization curve, HARD magnetic materials.
	4th	Hysteresis loop & loss.
	5th	
	1st	Eddy currents, eddy currents, Factors affecting hysteresis loss & permeability.
	2nd	Magnetostatic:
	3rd	Soft magnetic material
	4th	Orientation of sheet steel.
	5th	

Dicipline:		Semester:	Name of the Teaching Faculty:	
Subject:		No of Days/Week Class Allotted: _____	Semester From date: _____ To date _____	No.of Weeks:
WEEK	Class Day	Theory Topics		
	1st	magnetic Anisotropy, Annealing		
	2nd	Introduction, Star materials & Process - thermomaterial		
	3rd	thermoelectric material, Bi-Metals		
	4th	Soldering materials,		
	5th			
	1st	Fuel materials,		
	2nd	Dehydrating materials,		
	3rd	class Test		
	4th	Discussion of Ass. Assignment Question		
	5th			
	1st	previous sem question discussion		
	2nd	previous sem Question discussion		
	3rd	<del>AMR 100</del>		
	4th	class test question discuss along with buttons of evaluated ans sheet to the student		
	5th			




WEEK	Class Day	Theory Topics
	1st	
	2nd	
	3rd	
	4th	
	5th	
	1st	
	2nd	
	3rd	
	4th	
	5th	
	1st	
	2nd	
	3rd	
	4th	
	5th	