

ORISSA SCHOOL OF ENGINEERING & POLYTECHNIC, BERHAMPUR

Discipline : ELECTRICAL ENGG.	Semester: 3th Sem	Name of the Teaching Faculty : Er. RANJITA KUMARI SAHU
Subject : EEM	No. of Days / per week class allotted : 04	Semester From date : No. of Weesks : 15
Week	Class Day	Topics
1ST	1st	Chapter 1 (CONDUCTING MATERIAL) 1. 1 Introduction
	2nd	1. 2 Resistivity, factors affecting resistivity
	3rd	1. 3 Classification of conducting materials into
	4th	low-resistivity and high resistivity materials
2ND	1st	1. 4 Low Resistivity Materials
	2nd	Application of copper
	3rd	Application of silver and gold
	4th	Application of Iuminium and steel
3RD	1st	1. 5 Stranded conductors
	2nd	1. 6 Bundled conductors
	3rd	1. 7 Low resistivity copper alloys
	4th	1. 8 High Resistivity Materials and their Applications (Tungsten, Carbon, Platinum, Mercury)
4TH	1st	1. 9 Superconductivity
	2nd	1. 10 Superconducting materials
	3rd	1. 11 Application of superconductor materials
	4th	1. 11 Application of superconductor materials

5TH	1st	SEMICONDUCTING MATERIAL(CHAPTER 2) 2.1 Introduction
	2nd	2. 2 Semiconductors 2.3 Electron energy and Energy band theory
	3rd	2. 4 Excitation of Atoms
	4th	2. 5 Insulators, Semiconductors and Conductors , 2.6 Semiconductor Material

6TH	1st	2. 7 Covalent Bonds	2.8
	2nd	2. 8 Intrinsic Semiconductors	
	3rd	2. 9 Extrinsic Semiconductors 2. 10 N-Type Materials 2. 11 P-Type Materials	
	4th	2. 12 Minority and Majority Carriers 2. 13 Semi-Conductor Materials	

7TH	1st	2.14 Application of rectifier, photo conducting cell, photo voltaic cell , varistors	3.1
	2nd	hall effect generator, solar power.	
	3rd	INSULATING MATERIAL(CHAPTER 3) Introduction, general property of insulating material	
	4th	electrical, visual, mechanical, thermal, chemical property, ageing	

8TH	1st	3.3 Insulating Materials – Classification, properties, applications
	2nd	3.3.1 Introduction
	3rd	3.3.2 Classification of insulating materials on the basis physical structure
	4th	chemical structure.

	1st	3.4 Insulating Gases
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9TH	2nd	3.4.1 Introduction.
	3rd	3.4.2 Commonly used insulating gases
	4th	DIELECTRIC MATERIAL(CHAPTER 4)
		4.1 Introduction
10TH		
	1st	4.2 Dielectric Constant of Permittivity
	2nd	4.3 Polarization
	3rd	4.4 Dielectric Loss
	4th	4.5 Electric Conductivity of Dielectrics and their Break Down
11TH	1st	4.6 Properties of Dielectrics.
	2nd	4.7 Applications of Dielectrics
	3rd	4.7 Applications of Dielectrics
	4th	MAGNETIC MATERIAL(CHAPTER 5) 5.1 Introduction
12TH	1st	5.2 Classification 5.2.1 Diamagnetism
	2nd	5.2.2 Para magnetism
	3rd	5.3 magnetization curve
	4th	5.4 Hysteresis 5.5 Eddy current
13TH	1st	5.6 Curie Point ,5.7 Magneto- striction
	2nd	5.8 Soft and Hard magnetic Materials
	3rd	5.8.1 Soft magnetic materials 5.8.2 Hard magnetic materials
	4th	MATERIAL FOR SPECIAL PURPOSES(CHAPTER 6) 6.1 Introduction

14TH	1st	6.2 Structural Materials
	2nd	6.3 Protective Materials
	3rd	6.3.1 Lead
	4th	6.3.2 Steel tapes, wires and strips 6.4 Other Materials

15TH	1st	6.4.1 Thermocouple materials
	2nd	6.4.2 Bimetals
	3rd	6.4.3 Soldering Materials
	4th	6.4.4 Fuse and Fuse materials. Dehydrating material


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