

Discipline – Electrical Engg	SEMESTER 3 RD	NAME OF THE TEACHING FACULTY- SIBANI PANDA, LECT(ELECT.)	
SUB-EEM	No Of Days Per Week Class Alloted- 4 P	SEMESTER FROM 15.09.2022 to 22.12.2022 NO OF WEEK – 13 WEEKS	
WEEK	CLASS DAY	THEORY	STATUS
1 st week	1 ST day 2 nd day 3 rd day 4 th day	Conducting Materials: 1 . 1 Introduction 1 . 2 Resistivity, factors affecting resistivity 1.3 Classification of conducting materials into low resistivity and high resistivity materials	
2 nd week	1 ST day 2 nd day 3 rd day 4 th day	1 . 4 Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel) 1 . 5 Stranded conductors 1 . 6 Bundled conductors	
3 rd week	1 ST day 2 nd day 3 rd day 4 th day	1 . 7 Low resistivity copper alloys 1 . 8 High Resistivity Materials and their Applications(Tungsten, Carbon, Platinum, Mercury) 1 . 9 Superconductivity	
4 th week	1 ST day 2 nd day 3 rd day 4 th day	1 . 10 Superconducting materials 1 . 11 Application of superconductor materials	
5 th week	1 ST day 2 nd day 3 rd day 4 th day	Semiconducting Materials: 2 . 1 Introduction 2 . 2 Semiconductors 2 . 3 Electron Energy and Energy Band Theory 2 . 4 Excitation of Atoms 2 . 5 Insulators, Semiconductors and Conductors	
6 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day	2 . 6 Semiconductor Materials 2 . 7 Covalent Bonds 2 . 8 Intrinsic Semiconductors 2 . 9 Extrinsic Semiconductors 2 . 10 N-Type Materials 2 . 11 P-Type Materials 2 . 12 Minority and Majority Carriers 2 . 13 Semi-Conductor Materials	
7 TH WEEK	1 ST day 2 nd day 3 rd day 4 th day	2 . 14 Applications of Semiconductor materials 2.14.1 Rectifiers 2.14.2 Temperature-sensitive resistors or thermistors 2.14.3 Photoconductive cells 2.14.4 Photovoltaic cells 2.14.5 Varistors	

		<p>2.14.6 Transistors 2.14.7 Hall effect generators 2.14.8 Solar power</p> <p>Insulating Materials: 3.1 Introduction</p>	
8 TH WEEK	<p>1ST day 2ND day 3RD day 4TH day</p>	<p>3.2 General properties of Insulating Materials 3.2.1 Electrical properties 3.2.2 Visual properties 3.2.3 Mechanical properties 3.2.4 Thermal properties 3.2.5 Chemical properties 3.2.6 Ageing 3.3.1</p>	
9 TH WEEK	<p>1ST day 2ND day 3RD day 4TH day</p>	<p>3.3 Insulating Materials – Classification, properties, applications 3.3.1 Introduction Classification of insulating materials on the basis physical and chemical structure</p> <p>3.4 Insulating Gases 3.4.1 Introduction. 3.4.2 Commonly used insulating gases</p>	
10 TH WEEK	<p>1ST day 2ND day 3RD day 4TH day</p>	<p>Dielectric Materials: 4.1 Introduction 4.2 Dielectric Constant of Permittivity 4.3 Polarization 4.4 Dielectric Loss</p>	
11 TH WEEK	<p>1ST day 2ND day 3RD day 4TH day</p>	<p>4.5 Electric Conductivity of Dielectrics and their Break Down 4.6 Properties of Dielectrics. 4.7 Applications of Dielectrics.</p>	
12 TH WEEK	<p>1ST day 2ND day 3RD day 4TH day</p>	<p>Magnetic Materials: 5.1 Introduction 5.2 5.3 Classification 5.3.1 Diamagnetism 5.3.2 Para magnetism 5.3.3 Ferromagnetism 5.4 Magnetization Curve</p>	
13 TH WEEK	<p>1ST day 2ND day 3RD day 4TH day</p>	<p>5.5 Hysteresis 5.6 Eddy Currents 5.7 Curie Point 5.8 Magneto-striction 5.9 Soft and Hard magnetic Materials 5.9.1 Soft magnetic materials 5.9.2 Hard magnetic materials</p>	

14 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day	Materials for Special Purposes 6.1 Introduction 6.2 Structural Materials 6.3 Protective Materials 6.3.1 Lead 6.3.2 Steel tapes, wires and strips	Extra classes to be done for course completion.
15 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day	6.4 Other Materials 6.3.3 Thermocouple materials 6.3.4 Bimetals 6.3.5 Soldering Materials 6.3.6 Fuse and Fuse materials. 6.3.7 Dehydrating material.	

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14.09.22