

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 01.07.2024 TO 08.11.2024 NO OF WEEK – 15 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 2.14.6 Transistors	

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

Daniel
28.06.24