

Lesson Plan

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	Discipline:Electrical Engineering	Semester-3rd Winter 2023 (A)	Name of the Teaching Faculty: SIBANI SANKAR SWAIN
Sl. No	Subject-Electrical Engineering Material	No. Of Days/ Week class allotted:04	Semester From date: 07/08/2023 To date: 30/11/2023 No of weeks: 16
	Weeks/Months	Class Day	Topic
1	1st Week	1st(07.08.2023)	1 . 1 Introduction
		2ns(10.08.2023)	1 . 2 Resistivity, factors affecting resistivity
		3rd(10.08.2023)	1 . 3 Classification of conducting materials into low-resistivity
		4th(11.08.2024)	1 . 3 Classification of high resistivity materials
2	2nd Week	1st(14.08.2023)	1 . 4 Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel)
		2nd(17.08.2023)	1 . 4 Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel)
		3rd(17.08.2023)	1 . 5 Stranded conductors.
		4th(18.08.2023)	1 . 6 Bundled conductors.
3	3rd Week	2nd(21.08.202)	1 . 7 Low resistivity copper alloys.
		3rd(24.08.2023)	1 . 8 High Resistivity Materials and their Applications(Tungsten.)
		3rd(24.08.2023)	1 . 8 High Resistivity Materials and their Applications(Carbon)
		4th(25.08.2023)	Platinum
4	4th Week	1st(28.08.2023)	Mercury
		2nd(31.08.2023)	1 . 9 Superconductivity.
		3rd(31.08.2023)	1 . 10 Superconducting materials.
		4th(01.09.2023)	1 . 11 Application of superconductor materials.
5	5th Week	1st(04.09.2023)	Semiconducting Materials: 2 . 1 Introduction
		2nd(07.09.2023)	2 . 2 Semiconductors 2 . 3 Electron Energy and Energy Band Theory
		3rd(07.09.2023)	2 . 4 Excitation of Atoms 2 . 5 Insulators, Semiconductors and Conductors2 . 4 Excitation of
		4th(08.09.2023)	2 . 6 Semiconductor Materials 2 . 7 Covalent Bonds
6	6th Week	1st(11.09.2023)	2 . 8 Intrinsic Semiconductors 2 . 9 Extrinsic Semiconductors
		2nd(14.09.2023)	2 . 10 N-Type Materials 2 . 11 P-Type Materials
		2nd(14.09.2023)	2 . 12 Minority and Majority Carriers 2 . 13 Semi-Conductor Materials
		4th(15.09.2023)	14 Applications of Semiconductor materials 2.14.1 Rectifiers

7	7th Week	1st(18.09.2023	2.14.2 Temperature-sensitive resistors or thermistors 2.14.3 Photoconductive cells
		2nd(21.09.2023	Varistors 2.14.6 Transistors 2.14.7 Hall effect generators 2.14.8 Solar power
		3rd(21.09.2023	Insulating Materials: 3 . 1 Introduction
		4th(23.09.2023	3 . 2 General properties of Insulating Materials 3.2.1 Electrical properties
8	8th Week	1st(25.09.2023	3.2.2 Visual properties 3.2.3 Mechanical properties
		2nd(28.09.2023	3.2.4 Thermal properties 3.2.5 Chemical properties
		3rd(28.09.2023	3.2.6 Ageing 3.3 Insulating Materials – Classification, properties, applications 3.3.1 Introduction 3.3.2 Classification of insulating materials on the basis physical and
9	9th Week	1st(05.10.2023	3.4 Insulating Gases,3.4.2 Commonly used insulating gases
		2nd(06.10.2023	Dielectric Materials: 4.1 Introduction
		3rd(06.10.2023	4.2 Dielectric Constant of Permittivity 4.3 Polarization
10	10th Week	1st(09.10.2023	4.4 Dielectric Loss
		2nd(12.10.2023	4.5 Electric Conductivity of Dielectrics and their Break Down
		3rd(12.10.2023	4.6 Properties of Dielectrics.
		4th(13.10.2023	4.7 Applications of Dielectrics.
11	11th Week	1st(16.10.2023	Magnetic Materials: 5.1 Introduction
		2nd(19.10.2023	5.2 Classification 5.2.1 Diamagnetism
		3rd(19.10.2023	5.2.2 Para magnetism 5.2.3 Ferromagnetism
		4th(20.10.2023	5.3 Magnetization Curve 5.4 Hysteresis
12	12th Week	1st(30.10.2023	5.5 Eddy Currents 5.6 Curie Point
		2nd(02.11.2023	5.7 Magneto-striction 5.8 Soft and Hard magnetic Materials
		3rd(02.11.2023	5.8.1 Soft magnetic materials
		4th(03.11.2023	5.8.1 Soft magnetic materials
13	13th Week	1st(06.11.2023	Materials for Special Purposes 6.1 Introduction
		2nd(09.11.2023	6.2 Structural Materials
		3rd(09.11.2023	6.3 Protective Materials 6.3.1 Lead
		4th(10.11.2023	6.3.2 Steel tapes, wires and strips

14	14th Week	1st(13.11.2023	6.4 Other Materials 6.4.1 Thermocouple materials
		2nd(16.11.2023	6.4.2 Bimetals 6.4.3 Soldering Materials
		3rd(16.11.2023	6.4.4 Fuse and Fuse materials.
		4th(17.11.2023	6.4.4 Fuse and Fuse materials
	15th Week	1st(20.11.2023	6.3.2 Steel tapes, wires and strips
		2nd(23.11.2023	6.3.2 Steel tapes, wires and strips
		3rd(23.11.2023	6.4 Other Materials 6.4.1 Thermocouple materials
		4th(24.11.2023	6.4.5 Dehydrating material.
	16th Week	1st(30.11.2023	6.4.5 Dehydrating material.