



GOVT. POLYTECHNIC KORAPUT

DEPARTMENT OF ELECTRICAL ENGG.

LESSON PLAN

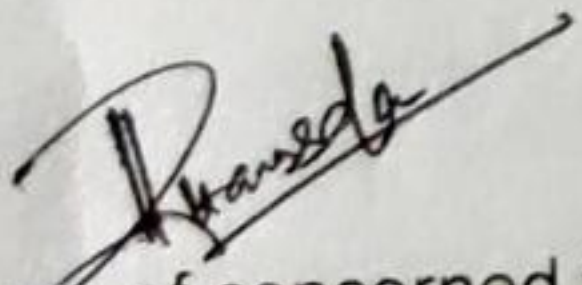
Name of the faculty--:Ruhia Hansda
 Discipline-----:Electrcal engg.
 Semester-----:3rd
 Subject-----:Electrcal engineering material
 Duration-----:15 w
 Work load per week-:4

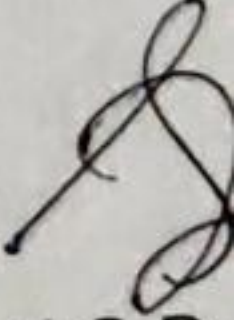
WEEK	THEORY	
	Lecture day	Topic
1	1	Conducting materials(16) Introduction 1 . 2 Resistivity, factors affecting resistivity
	2	Classification of conducting materials into low-resistivity and high resistivity materials
	3	Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel)
	4	Stranded conductors
2	1	Bundled conductors ,
	2	Bundled conductors ,
	3	Low resistivity copper alloys
	4	Low resistivity copper alloys
3	1	High Resistivity Materials and their Applications(Tungsten, Carbon, Platinum, Mercury)
	2	High Resistivity Materials and their Applications(Tungsten, Carbon, Platinum, Mercury)
	3	High Resistivity Materials and their Applications(Tungsten, Carbon, Platinum, Mercury)
	4	Superconductivity
4	1	Superconducting materials
	2	Superconducting material
	3	Application of superconductor materials
	4	Application of superconductor materials
5	1	2. Semiconducting Materials(10) ,Introduction,Semiconductors
	2	Electron Energy and Energy Band Theory , Excitation of Atoms
	3	Insulators, Semiconductors and Conductors
	4	Semiconductor Materials Covalent Bonds
6	1	Intrinsic Semiconductors 2 . 9 Extrinsic Semiconductors
	2	N-Type Materials 2 . 11 P-Type Materials
	3	Minority and Majority Carriers 2 . 13 Semi-Conductor Materials
	4	Applications of Semiconductor materials 2.14.1 Rectifiers
7	1	Temperature-sensitive resistors or thermistors 2.14.3 Photoconductive cells
	2	Photovoltaic cells 2.14.5 Varistors 2.14.6 Transistors 2.14.7 Hall effect generators, Solar power
	3	3.Insulating materials(9) : Introduction 3 . 2 General properties of Insulating Materials
	4	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



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8	1	Insulating Materials – Classification, properties, applications
	2	Insulating Materials – Classification, properties, applications
	3	Insulating Materials – Classification, properties, applications
	4	Insulating Materials – Classification, properties, applications
9	1	Insulating Materials – Classification, properties, applications
	2	4 Insulating Gases 3.4.1 Introduction.
	3	Commonly used insulating gases
	4	4. Dielectric Materials(8): Introduction
10	1	Dielectric Constant of Permittivity
	2	Polarization
	3	Dielectric Loss
	4	Electric Conductivity of Dielectrics and their Break Down
11	1	Electric Conductivity of Dielectrics and their Break Down
	2	Properties of Dielectrics
	3	Applications of Dielectrics.
	4	5. Magnetic Materials:Introduction 5.2 Classification
12	1	Diamagnetism 5.2.2 Para magnetism 5.2.3 Ferromagnetism
	2	Magnetization Curve
	3	Hysteresis
	4	Eddy Currents
13	1	Curie Point 5.7 Magneto-striction
	2	Soft and Hard magnetic Materials 5.8.1 Soft magnetic materials
	3	Hard magnetic materials
	4	6. Materials for Special Purposes:(9): Introduction 6.2 Structural Materials
14	1	Protective Materials 6.3.1 Lead
	2	Steel tapes, wires and strips
	3	Other Materials
	4	Thermocouple materials
15	1	Bimetals
	2	Soldering Materials
	3	Fuse and Fuse materials
	4	Dehydrating material.


Signature of concerned faculty


H.O.D