

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



PROGRESS REGISTER Session-2022-2023

Discipline: Electrical Engg.






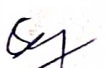
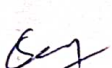

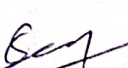

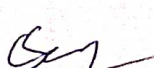
Semester: 3rd
Section: A

Subject: Electrical Engineering Material

Name of the Teaching Faculty: Subesh Chandra Nayak

Subject: Electrical Engineering Material No. of Days/per week class allotted 4

Semester From Date : 15.09.2022 To Date : 21.01.2023 No. of Weeks : 16

Date	Topics to be covered as per Lesson Plan	Topics actually covered	Points/contents Discussed (in brief)	Signature of Teacher
15.9.2022	Introduction of conducting material.	Introducing conducting materials.	Conducting materials	
19.9.2022	Resistivity conductivity	Resistivity conductivity	Defination formula	
21.9.2022	factors affecting resistivity. Discussion about conducting material.	factors affecting resistivity Discussion of conducting materials	affect on temperature changes	
22.9.2022	Classification of conducting material	Classification of conducting materials.	Various types	
24.9.2022	low resistivity material	low resistivity materials	name of low resistivity material	
26.9.2022	high resistivity material	high resistivity materials.	name of high resistivity material.	
28.9.2022	Properties and application of low resistivity material	Properties & Appl ⁿ . of low resistivity material.	Properties applications	
29.9.2022	Properties & application of low resistivity material	Properties and Appl ⁿ . of low resistivity material.	Properties applications	
1.10.2022	Stranded conductors	Stranded conductors	ACSR conductors uses	
10.10.2022	Bundle conductors	Bundle conductors	Bundle conductors strand discussed	
12.10.2022	low resistivity copper alloys	low resistivity copper alloys.	various types of alloys discussed	

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Date	Topics to be covered as per Lesson Plan	Topics actually covered	Points/contents Discussed (in brief)	Signature of Teacher
13.10.2022	Properties & Appl ⁿ . of high resistivity material.	Properties & Appl ⁿ . of high resistivity material.	Properties Application	Boy
15.10.2022	Properties & Appl ⁿ . of high resistivity materials.	Properties & Appl ⁿ . of high resistivity material.	Properties Application	Boy
17.10.2022	Superconductivity	Superconductivity	Superconductivity Definition	Boy
19.10.2022	Superconducting materials	Superconducting Materials	Superconducting materials Ex: Niobium, magnesium diboride & Cuprates etc	Boy
20.10.2022	Application of Superconductor materials	Appl ⁿ . of Superconducting materials.	Application discussed	Boy
22.10.2022	Introduction of Semiconducting materials Semiconductors	Introduction of Semiconductor materials. Semiconductors	Semiconductor material Definition	Boy
26.10.2022	Electron Energy & Energy band Theory	Electron Energy & Energy band Theory	Various band definition valence band conduction band etc.	Boy
27.10.2022	Excitation of atoms Insulators Semiconductors & conductor.	Excitation of atoms, Insulators Semiconductors & conductors	Excitation Insulators Semiconductors conductors definition	Boy
29.10.2022	Semiconductor materials Covalent band	Semiconductor materials. Covalent band	Silicon, Germanium gallium arsenide etc.	Boy
31.10.2022	Intrinsic Semiconductor Extrinsic Semiconductor	Intrinsic Semiconductor Extrinsic Semiconductor	defn. of intrinsic & extrinsic semiconductor discussed Explanation	Boy
2.11.2022	N type and P-type Semiconductor materials.	N type & P-type Semiconductor Materials.	N type semiconductor material. P-type semiconductor material.	Boy

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Semester From Date : 15.09.2022 To Date : 25.01.2023 No. of Weeks : 16

Date	Topics to be covered as per Lesson Plan	Topics actually covered	Points/contents Discussed (in brief)	Signature of Teacher
3.11.2022	Minority and majority Carrier	Minority & majority Carriers	Minority carrier Majority carrier	Boy
5.11.2022	Appl ⁿ of Semiconductor Materials Rectifiers Thermistors	Appl ⁿ of Semi-conductors Material Rectifier Thermistors	Application of Semiconductor material. Rectifier, thermistor.	Boy
7.11.2022	Photoconductive Cells Photovoltaic Cells Varistors.	Photoconductive Cells Photovoltaic Cells Varistors	Photoconductive Cell. Photovoltaic cell Varistors.	Boy
9.11.2022	Transistors, Hall effect generators Solar Power.	Transistors, Hall effect of generators Solar Power	P-N-P transistors N-P-N transistors Hall effect Solar power	Boy
10.11.2022	Introduction of insulating materials	Introduction of insulating materials.	definition example.	Boy
12.11.2022	General Properties of insulating materials	General Properties of insulating materials	Properties	Boy
14.11.2022	Electrical Properties of insulating materials.	Electrical Properties of insulating materials.	Electrical properties	Boy
17.11.2022	Visual & Mechanical properties of insulating Materials	Visual & Mechanical properties of insulating materials	Visual properties Mechanical properties	Boy
19.11.2022	Thermal Properties of insulating materials	Thermal Properties of insulating materials	Thermal properties	Boy
21.11.2022	Chemical Properties of insulating material	Chemical Properties of insulating material	Chemical properties	Boy
23.11.2022	Ageing Classification of insulating materials.	Ageing Classification of insulating materials.	Ageing definition different classes discussed.	Boy

Subject: Electrical Engineering Material No. of Days/per week class allotted 4

Semester From Date : 15.09.2022 To Date : 21.01.2023 No. of Weeks : 16

Date	Topics to be covered as per Lesson Plan	Topics actually covered	Points/contents Discussed (in brief)	Signature of Teacher
24.11.2022	Properties and appl ⁿ . of insulating material	Properties and Appl ⁿ of insulating materials.	Properties Application	Set
26.11.2022	Classification of insulating material on the basis of Physical & chemical structure	Classification of insulating material on the basis of Phys & Chemical structure	classification on the basis of physical & chemical structure	Set
28.11.2022	Insulating Gases Commonly used insulating Gases.	Insulating Gases Commonly used insulating Gases	SF ₆ Nitrogen CO ₂ etc.	Set
30.11.2022	Introduction of Dielectric material.	Introduction of Dielectric material.	Introduction	Set
1.12.2022	Dielectric materials Dielectric constant of permittivity	Dielectric materials Dielectric Const. of permittivity	definition Ex:- Ceramic, Plastic, Mica, glass, Distilled water, Dry air, vacuum, nitrogen, helium	Set
3.12.2022	Polarisation.	Polarisation	Polarisation	Set
5.12.2022	Dielectric loss	Dielectric loss	Dielectric loss	Set
7.12.2022	Electric Conductivity of Dielectric and their breakdown	Electric Conductivity of Dielectric & their breakdown	Conductivity discussed breakdown discussed	Set
8.12.2022	Properties of Dielectric.	Properties of Dielectric	Properties	Set
10.12.2022	Application of Dielectrics	Appl ⁿ . of Dielectric.	Application fabricating capacitors	Set
12.12.2022	Introduction of Magnetic Materials.	Introduction of Magnetic Materials.	Introduction	Set


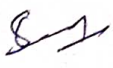
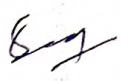
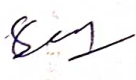

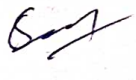
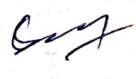
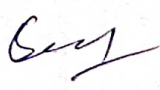

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14.12.2022	Classification of Magnetic material	Classification of Magnetic Material	Soft magnetic material. Hard magnetic material.	
15.12.2022	Diamagnetism Paramagnetism.	Diamagnetism Paramagnetism,	Diamagnetism. Paramagnetism	
17.12.2022	Ferromagnetism Magnetisation Curve	Ferromagnetism Magnetisation Curve	ferromagnetism. Magnetising curve.	
19.12.2022	Hysteresis Eddy currents Curie Point	Hysteresis Eddy currents Curie Point	Hysteresis Curve Eddy current Curie point	
21.12.2022	Magnetostriction Soft and hard magnetic Materials	Magnetostriction Soft & hard magnetic Material.	Magnetostriction definition.	
22.12.2022	Soft Magnetic materials.	Soft magnetic materials.	Soft magnetic material. nickel iron alloy soft ferrites Properties, Appl.	
24.12.2022	Hard Magnetic Material.	Hard magnetic materials.	Ex. Cobalt steel hard ferrites properties Application.	
26.12.2022	Introduction of Special Purpose materials.	Introduction of Special Purpose materials	Introduction resistor couple materials bimetals solders	
28.12.2022	Structural Materials.	Structural materials	Iron, steel Cement, wood R.C.C etc etc.	
29.12.2022	Protective materials Lead	Protective Materials Lead	Protective material. Uses of lead.	
31.12.2022	Steel tapes, Wires & Strips	Steel tapes Wires & Strips	Uses of Steel tapes wires and strips.	

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2.01.2023	Other Materials Thermocouple materials	Other Materials Thermocouple materials	Other materials Thermocouple materials	
4.01.2023	Bimetals	Bimetals	Alloy of iron and nickel. iron, nickel constantan uses	
5.1.2023	Soldering Materials .	Soldering Materials	Hard solders Soft solders	
7.1.2023	Fuse and Fuse Materials	Fuse and Fuse Materials	Here fuse protection of fuse materials alloy of Bi, Pb, Sn Cd	
9.1	Dehydrating Materials .	Dehydrating Materials .	Definition and Uses.	
11.1	Selective question discussion.	Question discussion	Question discussion	
12.1	Objective Question discussion	Objective. question discussion	Question discussion	
18.1.2023	Revision	Revision	Revision	
19.1.2023	Revision	Revision	Revision	
21.1.2023	Revision.	Revision	Revision	