GANDHISCHOOLOFENGINEERING

BHABANDHA,BERHAMPUR

BRANCH:-ELECTRICALENGINEERING

SEMESTER:-3RD

SUBJECT:-EEM

NameoftheFaculty-ER.SURABHI TRIPATHY &ER.G .K MAHAPATRA

		Topictobe taken				Actualtopictaken		
Sl. No	**Topic/Module**	**No.of period**	**Details of the topics**	**Date**	**Topic No.**	**TopicName**	**Date**	**Remarks**
1	Conducting Materials:	16	1 . 1 Introduction 1 . 2 Resistivity, factors affecting resistivity 1 . 3 Classification of conducting materials into low-resistivity and high resistivity materials 1 . 4 Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel) 1 . 5 Stranded conductors 1 . 6 Bundled conductors 1 . 7 Low resistivity copper alloys 1 . 8 High Resistivity Materials and their Applications(Tungsten, Carbon, Platinum, Mercury) 1 . 9 Superconductivity 1 . 10 Superconducting materials 1 . 11 Application of superconductor materials	15.09.2022 TO 17.10.2022	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8	Introduction Resistivity, factors affecting resistivity Classification of conducting materials into low-resistivity and high resistivity materials Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel) Stranded conductors Bundled conductors Low resistivity copper alloys High Resistivity Materials and their Applications(Tungsten , Carbon, Platinum, Mercury) Superconductivity Superconducting materials	15.09.2022 15.09.2022 17.09.2022 20.09.2022 22.09.2022 26.09.2022 27.09.2022 28.09.2022 29.09.2022 11.10.2022 12.10.2022 13.10.2022 17.10.2022	

					1.9 1.10 1.11	Application of superconductor materials	18.10.2022	
102	Semiconductin g Materials:	10	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 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 2 . 14 Applications of Semiconductor materials 2.14.1 Rectifiers 2.14.2 Temperature-sensitive resisters or thermistors 2.14.3 Photoconductive cells 2.14.4 Photovoltaic cells 2.14.5 Varisters 2.14.6 Transistors 2.14.7 Hall effect generators 2.14.8 Solar power.	19.10.2022 TO 03.11.2022	2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.12 2.13 2.14 2.14.1 2.14.2 2.14.3 2.14.4	Introduction Semiconductors Electron Energy and Energy Band Theory Excitation of Atoms Insulators, Semiconductors and Conductors Semiconductor Materials Covalent Bonds Intrinsic Semiconductors Extrinsic Semiconductors N-Type Materials P-Type Materials Minority and Majority Carriers Semi-Conductor Materials Applications of Semiconductor materials Rectifiers Temperature-sensitive resisters or thermistors Photoconductive cells Photovoltaic cells Varisters Transistors Hall effect generators Solar power.	19.10.2022 20.10.2022 22.10.2022 26.10.2022 27.10.2022 01.11.2022 02.11.2022 03.11.2022	

					2.14.5 2.14.6 2.14.7 2.14.8			

3	Insulating Materials:	09	3 . 1 Introduction 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 Insulating Materials – Classification, properties, applications 3.3.1 Introduction 3.3.2 Classification of insulating materials on the basis physical and.chemical structure 3.4 Insulating Gases 3.4.1 Introduction. 3.4.2 Commonly used insulating gases	09.11.2022 TO 26.11.2022	3.1 3.2 3.2 .1 3.2 .2 3.2 .3 3.2 .4 3.2 .5 3.2 .6 3.3 3.3 .1 3.3 .2 3.4 3.4 .1 3.4 .2	3 . 1 Introduction 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 Insulating Materials – Classification, properties, applications 3.3.1 Introduction 3.3.2 Classification of insulating materials on the basis physical and. chemical structure 3.4 Insulating Gases 3.4.1 Introduction. 3.4.2 Commonly used insulating gases	09.11.2022 10.11.2022 15.11.2022 17.11.2022 18.11.2022 19.11.2022 21.11.2022 22.11.2022 26.11.2022	
4	Dielectric Materials:	08	4.1 Introduction 4.2 Dielectric Constant of Permittivity 4.3 Polarization 4.4 Dielectric Loss 4.5 Electric Conductivity of Dielectrics and their Break Down 4.6 Properties of Dielectrics. 4.7 Applications of Dielectrics.	02.12.2022 TO 10.12.2022	4.1 4.2 4.3 4.4 4.5 4.7	4.1 Introduction 4.2 Dielectric Constant of Permittivity 4.3 Polarization 4.4 Dielectric Loss 4.5 Electric Conductivity of Dielectrics and their Break Down 4.6 Properties of Dielectrics. 4.7 Applications of Dielectrics	02.12.2022 05.12.2022 06.12.2022 07.12.2022 09.12.2022 10.12.2022	

5	Magnetic Materials:	08	5.1 Introduction 5.2 Classification 5.2.1 Diamagnetism 5.2.2 Para magnetism 5.2.3 Ferromagnetism 5.3 Magnetization Curve 5.4 Hysteresis 5.5 Eddy Currents 5.6 Curie Point 5.7 Magneto-striction 5.8 Soft and Hard magnetic Materials 5.8.1 Soft magnetic materials 5.8.2 Hard magnetic materials	12.12.2022 T0 21.12.2022	5.1 5.2 5.2 .1 5.2 .2 5.2 .3 5.3 5.4 5.5 5.6 5.7 5.8 5.8 .1 5.8 .2	5.1 Introduction 5.2 Classification 5.2.1 Diamagnetism 5.2.2 Para magnetism 5.2.3 Ferromagnetism 5.3 Magnetization Curve 5.4 Hysteresis 5.5 Eddy Currents 5.6 Curie Point 5.7 Magneto-striction 5.8 Soft and Hard magnetic Materials 5.8.1 Soft magnetic materials 5.8.2 Hard magnetic materials	12.12.2022 13.12.2022 16.12.2022 19.12.2022 20.12.2022 21.12.2022	

6	Materials for Special Purposes	09	6.1 Introduction 6.2 Structural Materials 6.3 Protective Materials 6.3.1 Lead 6.3.2 Steel tapes, wires and strips 6.4 Other Materials 6.4.1 Thermocouple materials 6.4.2 Bimetals 6.4.3 Soldering Materials 6.4.4 Fuse and Fuse materials. 6.4.5 Dehydrating material.	22.12.2022 TO 23.12.2022	6.1 6.2 6.3 6.3.1 6.3.2 6.4 6.4.1 6.4.2 6.4.3 6.4.4 6.4.5	6.1 Introduction 6.2 Structural Materials 6.3 Protective Materials 6.3.1 Lead 6.3.2 Steel tapes, wires and strips 6.4 Other Materials 6.4.1 Thermocouple materials 6.4.2 Bimetals 6.4.3 Soldering Materials 6.4.4 Fuse and Fuse materials. 6.4.5 Dehydrating material.	22.12.2022 23.12.2022	

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