

BALASORE SCHOOL OF ENGINEERING, BALASORE

LESSON PLAN FOR 3rd SEMESTER, SESSION:-2023-24(W-23)

BRANCH:- ELECTRICAL		SECTION- A & B		SEMESTER: 3 rd		
SUBJECT:- ELECTRICAL ENGG. MATERIALS				THEORY:-TH-4		
NAME OF TEACHER:- BAMADEV PATHI						
SL. No.	Month /No .of academic days available for the subject	Chapter	DATE	TOPICS TO BE COVERED	No of periods available as per syllabus	No of periods available as per plan
	AUG-2023 (20)	Unit-1	01/8/23	Conducting Materials: 1 . 1 Introduction	16	10
			02/8/23	1 . 2 Resistivity, factors affecting resistivity		
			03/8/23	1 . 3 Classification of conducting materials into low-resistivity and high resistivity materials		
			04/8/23	1 . 4 Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel)		
			07/8/23	1 . 4 Low Resistivity Materials and their Applications. (Copper, Silver, Gold, Aluminum, Steel)		
			08/8/23	1 . 5 Stranded conductors		
			09/8/23	1 . 6 Bundled conductors		
			10/8/23	1 . 7 Low resistivity copper alloys 1 . 8 High Resistivity Materials and their Applications(Tungsten, Carbon, Platinum, Mercury)		
			11/8/23	1 . 9 Superconductivity 1 . 10 Superconducting materials 1 . 11 Application of superconductor materials		
			14/8/23	1 . 9 Superconductivity 1 . 10 Superconducting materials 1 . 11 Application of superconductor materials		

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	AUG-2023	Unit-2	16/8/23	2. Semiconducting Materials 2.1 Introduction 2.2 Semiconductors	10	11
17/8/23			2.3 Electron Energy and Energy Band Theory 2.4 Excitation of Atoms			
18/8/23			2.5 Insulators, Semiconductors and Conductors			
21/8/23			2.6 Semiconductor Materials			
22/8/23			2.7 Covalent Bonds 2.8 Intrinsic Semiconductors 2.9 Extrinsic Semiconductors			
23/8/23			2.10 N-Type Materials 2.11 P-Type Materials			
24/8/23			2.12 Minority and Majority Carriers 2.13 Semi-Conductor Materials			
25/8/23			2.14 Applications of Semiconductor materials 2.14.1 Rectifiers 2.14.2 Temperature-sensitive resistors or thermistors			
28/8/23			2.14.3 Photoconductive cells 2.14.4 Photovoltaic cells			
29/8/23			2.14.5 Varistors 2.14.6 Transistors			
31/8/23			2.14.7 Hall effect generators 2.14.8 Solar power			
	SEP-2023 (16)	Unit-3	01/9/23	3. Insulating Materials: 3.1 Introduction 3.2 General properties of Insulating Materials	09	08
04/9/23			3.2.1 Electrical properties 3.2.2 Visual properties			
05/9/23			3.2.3 Mechanical properties 3.2.4 Thermal properties			
07/9/23			3.2.5 Chemical properties 3.2.6 Ageing			
08/9/23			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			

Sl. No.	Month /No .of academic days available for the subject	Chapter	DATE	TOPICS TO BE COVERED	No of periods available as per syllabus	No of periods available as per plan
	SEP-2023	Rest of Unit-3	11/09/23	3.3.2 Classification of insulating materials on the basis physical and chemical structure	08	07
			12/09/23	3.4 Insulating Gases 3.4.1 Introduction. 3.4.2 Commonly used insulating gases		
			13/09/23	3.4.2 Commonly used insulating gases		
		Unit-4	14/09/23	4. Dielectric Materials: 4.1 Introduction 4.2 Dielectric Constant of Permittivity		
			15/09/23	4.3 Polarization		
			21/09/23	4.4 Dielectric Loss		
			22/09/23	4.5 Electric Conductivity of Dielectrics and their Break Down		
			25/09/23	4.6 Properties of Dielectrics.		
			26/09/23	4.7 Applications of Dielectrics.		
			27/09/23	4.7 Applications of Dielectrics		
	Unit-5	28/09/23	5. Magnetic Materials: 5.1 Introduction			
	OCT-2023(11)	Unit-5	03/10/23	5.2 Classification 5.2.1 Diamagnetism 5.2.2 Para magnetism 5.2.3 Ferromagnetism	08	08
			04/10/23	5.3 Magnetization Curve		
			05/10/23	5.4 Hysteresis		
			06/10/23	5.5 Eddy Currents 5.6 Curie Point		
09/10/23			5.7 Magneto-striction 5.8 Soft and Hard magnetic Material			

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	OCT- 2023(11)	Rest of Unit-5	10/10/23	5.8.1 Soft magnetic materials	09	08
			11/10/23	5.8.2 Hard magnetic materials		
		Unit-6	12/10/23	6. Materials for Special Purposes 6.1 Introduction 6.2 Structural Materials		
			13/10/23	6.3 Protective Materials 6.3.1 Lead 6.3.2 Steel tapes, wires and strips		
			30/10/23	6.3.2 Steel tapes, wires and strips		
			31/10/23	6.4 Other Materials 6.4.1 Thermocouple materials		
	01/11/23		6.4.2 Bimetals			
	NOV - 2023(10)		02/11/23	6.4.3 Soldering Materials		
			03/11/23	6.4.4 Fuse and Fuse materials		
			06/11/23	6.4.5 Dehydrating material.		
			07/11/23	REVISION		
		08/11/23	REVISION			
		09/11/23	REVISION			
		10/11/23	REVISION			
13/11/23		REVISION				
14/11/23	REVISION					

Brief Summary of the Plan

SlnO	Month	Units/Chapter To be Covered	Percentage of Coverage
1	AUG	Chapter- 1, Chapter- 2	40 %
2	SEP	Chapter- 3, Chapter- 4, Chapter- 5 UP TO 5.1	40%
3	OCT	Chapter- 5 , Chapter- 6 , UP TO 6.4.1	10%
4	NOV	Chapter- 6	10%

Signature of the Faculty
Date

[Signature]
22/10/23

Signature of the Principal
Date

[Signature]
22/7/23