Lesson Plan

2023(W)

Subject:-**UEET** (Code) **TH-4** Name of faculty: Sujata Samal

Semester:-**5th** Class allotted:-**4p/w** Branch :- **Electrical Engg.**

Discipline	Semester:-5th	From date:-01/08/23 To date:30/11/23	Teaching Aid
Subject:	No. of days/ per week 4p/w	Theory/ Practical –Topics/Lesson	
Week	Date/Period		

1	01/08/23to 05/08/23	**1. ELECTROLYTIC PROCESS:** 1.1. Definition and Basic principle of Electro Deposition. 1.2. Important terms regarding electrolysis. 1.3. Faradays Laws of Electrolysis. 1.4. Definitions of current efficiency, Energy efficiency. 1.5. Principle of Electro Deposition.	White board & marker
2	07/08/23 to 12/08/23	1.6. Factors affecting the amount of Electro Deposition. 1.7. Factors governing the electro deposition. 1.8. State simple example of extraction of metals. 1.9. Application of Electrolysis.	White board & marker
3	14/08/23 to 9/08/23	**2. ELECTRICAL HEATING:** 2.1. Advantages of electrical heating. 2.2. Mode of heat transfer and Stephen's Law. 2.3. Principle of Resistance heating. (Direct resistance and indirect resistance heating.) 2.4. Discuss working principle of direct arc furnace and indirect arc furnace. 2.5. Principle of Induction heating.	White board & marker
4	21/08/23 to 6/08/23	2.5.1. Working principle of direct core type, vertical core type and indirect core type Induction furnace. 2.5.2. Principle of coreless induction furnace and skin effect. 2.6. Principle of dielectric heating and its application. 2.7. Principle of Microwave heating and its application.	White board & marker
5	28/08/23 2/09/23	**3. PRINCIPLES OF ARC WELDING:** 3.1. Explain principle of arc welding. 3.2. Discuss D. C. & A. C. Arc phenomena. 3.3. D.C. & A. C. arc welding plants of single and multi-operation type.	White board & marker
6	04/09/23 to 09/09/23	3.4. Types of arc welding. 3.5. Explain principles of resistance welding. 3.6. Descriptive study of different resistance welding methods	White board & marker

	11/09/23 to 16/09/23	**4. ILLUMINATION:** 4.1. Nature of Radiation and its spectrum. 4.2. Terms used in Illuminations. [Lumen, Luminous intensity, Intensity of illumination, MHCP, MSCP, MHSCP, Solid angle, Brightness, Luminous efficiency.]	White board & marker
8	18/09/23 to 23/09/23	4.3. Explain the inverse square law and the cosine law. 4.4. Explain polar curves. 4.5. Describe light distribution and control. Explain related definitions like maintenance factor and depreciation factors. 4.6. Design simple lighting schemes and depreciation factor. 4.7. Constructional feature and working of Filament lamps, effect of variation of voltage on working of filament lamps.	White board & marker
9	25/09/23 to 30/09/23	4.8. Explain Discharge lamps. 4.9. State Basic idea about excitation in gas discharge lamps. 4.10. State constructional factures and operation of Fluorescent lamp. (PL and PLL Lamps) 4.11. Sodium vapor lamps.	White board & marker
10	03/10/23 to 07/10/23	4.12. High pressure mercury vapor lamps. 4.13. Neon sign lamps. 4.14. High lumen output & low consumption fluorescent lamps.	White board & marker
11	09/10/23 to 14/10/23	**5. INDUSTRIAL DRIVES:** 5.1. State group and individual drive. 5.2. Method of choice of electric drives. 5.3. Explain starting and running characteristics of DC and AC motor.	White board & marker
12	16/10/23 to 20/10/23	5.4. State Application of: 5.4.1. DC motor. 5.4.2. 3-phase induction motor. 5.4.3. 3 phase synchronous motors. 5.4.4. Single phase induction, series motor, universal motor and repulsion motor.	White board & marker & smart board
13	30/10/23 to 04/11/23	**6. ELECTRIC TRACTION:** 6.1. Explain system of traction. 6.2. System of Track electrification. 6.3. Running Characteristics of DC and AC traction motor.	White board & marker
14	06/11/23 to 11/11/23	6.4. Explain control of motor: 6.4.1. Tapped field control.	White board & marker

		6.4.2. Rheostatic control. 6.4.3. Series parallel control.	
15	13/11/23 to 18/11/23	6.4.4. Multi-unit control. 6.4.5. Metadyne control. 6.5. Explain Braking of the following types: 6.5.1. Regenerative Braking.	White board & marker& smart board
16	20/11/23 to 25/11/23	6.5.2. Braking with 1-phase series motor. 6.5.3. Magnetic Braking.	White board & marker
17	28/11/23 to 30/11/23	Revision	

Signature of HOD

Signature of faculty