LESSON PLAN-2022-2023 SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR		
Discipline-ELECTRICAL	**Semester-3rd**	**Name of teaching faculty- Anil kumar Sahoo**
SUBJECT-Electrical Engineering Material	**No of days/ per week class alloted-5**	**SEM From date- 16.09.2022** **No of weeks-19**
Week	**Class day**	**Theory Topics-Utilization of Electrical Energy & Traction**
1st	**16.9.2022**	1.1. Definition and Basic principle of Electro Deposition. 1.2. Important terms regarding electrolysis.
	19.09.2022	1.3. Faradays Laws of Electrolysis.
	20.09.2022	1.4. Definitions of current efficiency, Energy efficiency.
2nd	21.09.2022	1.5. Principle of Electro Deposition.
	22.09.2022	do
	23.09.2022	1.6. Factors affecting the amount of Electro Deposition.
	24.09.2022	1.7. Factors governing the electro deposition.
3rd	26.09.2022	1.8. State simple example of extraction of metals.
	27.09.2022	1.9. Application of Electrolysis.
	28.09.2022	revision class
	29.09.2022	2.1. Advantages of electrical heating.
	30.09.2022	2.2. Mode of heat transfer and Stephen's Law.
	10.10.2022	2.3. Principle of Resistance heating. (Direct resistance and indirect resistance heating.)
	11.10.2022	do
	12.10.2022	2.4. Discuss working principle of direct arc furnace .
	13.10.2022	indirect arc furnace
5th	14.10.2022	class test
	15.10.2022	2.5. Principle of Induction heating.
1st	17.10.2022	2.5.1. Working principle of direct core type, vertical core type
	18.10.2022	indirect core type Induction furnace.
2nd	19.10.2022	2.5.2. Principle of coreless induction furnace and skin effect.
	20.10.2022	2.6. Principle of dielectric heating and its application.
	21.10.2022	2.7. Principle of Microwave heating and its application.
	22.10.2022	do
3rd	26.10.2022	3.1. Explain principle of arc welding.

	27.10.2022	3.2. Discuss D. C. & A. C. Arc phenomena
	28.10.2022	3.4. Types of arc welding.
	29.10.2022	INTERNAL
	31.10.2022	INTERNAL
4th	01.11.2022	INTERNAL
	02.11.2022	3.5. Explain principles of resistance welding
	03.11.2022	3.6. Descriptive study of different resistance welding methods.
	04.11.2022	do
5th	05.11.2022	4.1. Nature of Radiation and its spectrum.
	07.11.2022	DO
	10.11.2022	4.2. Terms used in Illuminations. [Lumen, Luminous intensity,
	11.11.2022	DO
1st	12.11.2022	DOUBT CLEARING CLASS
	15.11.2022	Intensity of illumination, MHCP, MSCP, MHSCP
	16.11.2022	Solid angle, Brightness, Luminous efficiency.
	17.11.2022	4.3. Explain the inverse square law and the cosine law.
2nd	18.11.2022	4.5. Describe light distribution and control.
	19.11.2022	Explain related definitions like maintenance factor and depreciation fc
	21.11.2022	4.6. Design simple lighting schemes and depreciation factor.
	22.11.2022	4.7. Constructional feature and working of Filament lamps
	23.11.2022	do
3rd	24.11.2022	effect of variation of voltage on working of filament lamps.
	25.11.2022	4.8. Explain Discharge lamps.
	26.11.2022	4.9. State Basic idea about excitation in gas discharge lamps.
	28.11.2022	4.10. State constructional factures and operation of Fluorescent lamp.
	29.11.2022	do
4th	30.11.2022	4.11. Sodium vapor lamps.
	01.12.2022	4.12. High pressure mercury vapor lamps
	02.12.2022	4.13. Neon sign lamps.
	03.12.2022	4.14. High lumen output & low consumption fluorescent lamps
	05.12.2022	5.1. State group and individual drive.
5th	06.12.2022	5.2. Method of choice of electric drives
1st	07.12.2022	5.3. Explain starting and running characteristics of DC and AC motor.
	08.12.2022	5.4. State Application of: 5.4.1. DC motor.
	09.12.2022	5.4.2. 3 phase synchronous motors
	10.12.2022	5.4.3. 3-phase induction motor.

2nd	12.12.2022	5.4.4. Single phase induction, series motor
	13.12.2022	5.4.5universal motor and repulsion motor.
	14.12.2022	6.1. Explain system of traction.
	15.12.2022	6.2. System of Track electrification.
	17.12.2022	6.3. Running Characteristics of DC and AC traction motor.
3rd	19.12.2022	6.4. Explain control of motor: 6.4.1. Tapped field control.
	20.12.2022	6.4.2. Rheostatic control.
	21.12.2022	6.4.3. Series parallel control.
	22.12.2022	6.4.4. Multi-unit control.
	23.12.2022	6.4.5. Metadyne control.
	24.12.2022	construction of (PL and PLL Lamps)

HOD **PRINCIPAL**