

**GOVERNMENT POLYTECHNIC ,GAJAPATI**  
**Department Of Electrical Engineering**

**LESSON PLAN**

Subject :TH-2: UEET

Semester : 5<sup>th</sup>

No of period: 60 (4hr /week)

Name of Faculty: Sri Deepak Ku Roul,Lect(S-2)

Branch : Electrical Engineering

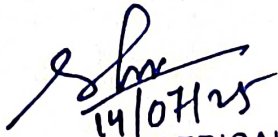
W.E.F :- 14.07.2025

Week	Period	Topic to be covered	Teaching Aid to be used
		<b>ELECTROLYTIC PROCESS:</b>	
1	1	Definition and Basic principle of Electro Deposition , Important terms regarding electrolysis.	White board ,Marker, Ref.books
	2	Faradays Laws of Electrolysis.	-do-
	3	Definitions of current efficiency, Energy efficiency , Principle of Electro Deposition.	-do-
	4	Factors affecting the amount of Electro Deposition.	-do-
2	5	Factors governing the electro deposition	-do-
	6	State simple example of extraction of metals, Application of Electrolysis	Smart Class room
		<b>ELECTRICAL HEATING:</b>	
	7	Advantages of electrical heating , Mode of heat transfer and Stephen's Law.	White board ,Marker, Ref.books
3	8	Principle of Resistance heating. (Direct resistance and indirect resistance heating.)	-do-
	9	Discuss working principle of direct arc furnace and indirect arc furnace.	-do-
	10	Principle of Induction heating. Working principle of direct core type, vertical core type Induction furnace	-do-
	11	Working principle of indirect core type Induction furnace ,Principle of coreless induction furnace and skin effect	-do-
4	12	Principle of dielectric heating and its application.	-do-
	13	Principle of Microwave heating and its application	Smart class room
		<b>PRINCIPLES OF ARC WELDING:</b>	
	14	Explain principle of arc welding.	White board ,Marker, Ref.books
5	15	Discuss D. C. & A. C. Arc phenomena	-do-
	16	D.C. & A. C. arc welding plants of single and multi-operation type	-do-
	17	Types of arc welding	-do-
	18	Explain principles of resistance welding	-do-
	19	Descriptive study of different resistance welding methods.	-do-

Week	Period	Topic to be covered	Teaching Aid to be used
		<b>ILLUMINATION:</b>	
		Nature of Radiation and its spectrum	Smart class
5	20		
6	21	Terms used in Illuminations. [Lumen, Luminous intensity, Intensity of illumination, MHCP, MSCP, MHSCP, Solid angle, Brightness, Luminous efficiency.	White board ,Marker, Ref.books
	22	Explain the inverse square law and the cosine law. Explain polar curves	-do-
	23	Describe light distribution and control. Explain related definitions like maintenance factor and depreciation factors	-do-
	24		-do-
7	25	Design simple lighting schemes and depreciation factor.	Smart class room
	26	Constructional feature and working of Filament lamps, effect of variation of voltage on working of filament lamps	White board ,Marker, Ref.books
	27	Explain Discharge lamps. State Basic idea about excitation in gas discharge lamps.	-do-
	28	State constructional features and operation of Fluorescent lamp. (PL and PLL Lamps)	-do-
8	29	Sodium vapor lamps.	Smart class room, whiteboard ,marker,
	30	High pressure mercury vapor lamps.	
	31	Neon sign lamps	
	32	High lumen output & low consumption fluorescent lamps	
		<b>INDUSTRIAL DRIVES:</b>	
9	33	State group and individual drive	White board ,Marker, Ref.books
	34	Method of choice of electric drives	-do-
	35	Explain starting and running characteristics of DC motor	-do-
	36	Explain starting and running characteristics of AC motor	-do-
10	37	State Application of:DC motor	Smart class
	38	State Application of: 3-phase induction motor	White board ,Marker
	39	State Application of: 3 phase synchronous motors	-do-
	40	State Application of: Single phase induction, series motor.	-do-
11	41	State Application of: universal motor and repulsion motor.	-do-
		<b>ELECTRIC TRACTION:</b>	
	42	Explain system of traction	White board ,Marker,
	43	System of Track electrification	-do-
	44	Running Characteristics of DC and AC traction motor.	-do-
12	45	Tapped field control	-do-
	46	Rheostatic control.	-do-
	47	Series parallel control	-do-
	48	Multi-unit control	-do-



Week	Period	Topic to be covered	Teaching Aid to be use
13	49	Metadyne control.	White board ,Marker, Ref.books
	50	Regenerative Braking.	-do-
	51	Braking with 1-phase series motor.	-do-
	52	Magnetic Braking.	-do-
14	53	Revision class ch-1	-do-
	54	Revision class ch-2	-do-
	55	Revision class ch-3	-do-
	56	Revision class ch-4	-do-
15	57	Revision class ch-5	-do-
	58	Revision class ch-6	-do-
	59	Previous Question Discussion	White board ,Marker, Prvious year question
	60	Previous Question Discussion	

  
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