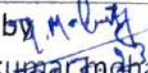
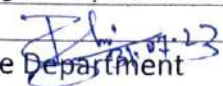



ACADEMIC SESSION: 2023-24 (Winter-2023)

Discipline : ELECTRICAL ENGINEERING			Semester : 5TH	Name of the Teaching Faculty : PRADEEP KUMAR MOHANTY
Subject : UTILIZATION OF ELECTRICAL ENERGY & TRACTION			Semester From date: 1/08/2023 to 30/11/2023	
SL NO.	DATE	CHAPTER	THEORY TOPIC NAME	NO.OF PERIODS
1	2.8.23	Electrolytic Process	Important terms regarding electrolysis	1
2	4.8.23		Faradays Laws of electrolysis	1
3	5.8.23		Faradays Laws of electrolysis	1
4	7.8.23		Defination of current efficiency,energy efficiency	1
5	9.8.23		Defination of current efficiency,energy efficiency	1
6	11.8.23		Factors affecting the amount of electro deposition	1
7	12.8.23		Factor governing the electrodisposition	1
8	14.8.23		State simple example of extraction of metals	1
9	16.8.23		Applications of electrolysis	1
10	18.8.23		Applications of electrolysis	1
11	19.8.23	ELECTRICAL HEATING	Advantages of electrical heating	1
12	20.8.23		Mode of heat transfer and stephen's law	1
13	21.8.23		Principle of resistance heating.(direct resistance & Indirect resistance heating)	1
14	23.8.23		Discuss working principle of direct arc furnace and indirect arc furnace	1
15	25.8.23		Discuss working principle of direct arc furnace and indirect arc furnace	1
16	26.8.23		Principle of Induction heating	1
17	28.8.23		Principle of Induction heating	1
18	1.09.23		Principle of coreless induction furnace & skin effect	1
19	2.09.23		Principle of dielectric heating & its application	1
20	4.9.23		Principle of microwave heating & its application	1
21	8.9.23		PRINCIPLES OF ARC WELDING	Explain principle of arc welding
22	9.9.23	Explain principle of arc welding		1
23	11.9.23	Discuss A.C & D.C arc phenomena		1
24	13.9.23	Discuss A.C & D.C arc phenomena		1
25	15.9.23	D.C & A.C arc welding plants of single and multipurpose type		1
26	16.9.23	D.C & A.C arc welding plants of single and multipurpose type		1
27	18.9.23	Types of arc welding		1
28	22.9.23	Explain principles of resistance welding		1

29	23.9.23		Descriptive study of different resistance welding methods	1	
30	25.9.23		Types of arc welding	1	
31	30.9.23	ILLUMINATION	Terms used in the illuminations[Lumen,Luminous intensity,Intensity of illumination,MHCP,MSCP,MHSCP,Solid angle,Brightness,Luminous efficiency]	1	
32	4.10.23		Explain polar curves	1	
33	5.10.23		Describe light distribution and control.Explain related definitions like maintenance factor and depreciation factor	1	
34	6.10.23		Design simple lighting schemes and depreciation factor	1	
35	7.10.23		Constructional feature & working of filament lamps,effect of variation of voltage on working of filament lamps.	1	
36	9.10.23		Explain Discharge lamps.	1	
37	11.10.23		State constructional features and operation of fluorescent lamp.(PL and PLL Lamps)	1	
38	13.10.23		High pressure mercury vapor lamps	1	
39	14.10.23		Neon Sign lamps	1	
40	16.10.23		High lumen output & low consumption fluorescent lamps	1	
41	17.10.23		High lumen output & low consumption fluorescent lamps	1	
42	18.10.23		INDUSTRIAL DRIVES	State group and individual drive	1
43	20.10.23			State group and individual drive	1
44	31.10.23			Method of choice of electric drives	1
45	1.11.23	Method of choice of electric drives		1	
46	2.11.23	Explain starting & running characteristic of D.C & A.C motor		1	
47	3.11.23	State application of DC motor		1	
48	4.11.23	3-Phase induction motor		1	
49	6.11.23	Single phase induction,series motor,universal motor and repulsion motor		1	
50	8.11.23	ELECTRIC TRACTION	System of track electrification	1	
51	10.11.23		Explain control of motor	1	
52	11.11.23		Tapped field control	1	
53	13.11.23		Rheostatic control	1	
54	15.11.23		Series parallel control	1	
55	17.11.23		Multi unit control	1	
56	18.11.23		Metadyne control	1	
57	20.11.23		Regenerative Braking	1	
58	22.11.23		Regenerative Braking	1	
59	24.11.23		Regenerative Braking	1	
60	25.11.23		Braking with 1 phase series Motor	1	
61	29.11.23		Braking with 1 phase series Motor	1	
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