



Lesson Plan-cum-Course Progress Report

Doc. Type: FM-TL-07

Rev. No: 1

Rev. Date: 23.12.2017

Name of the Institute :	CV Raman Polytechnic		
Department :	Electrical Engineering		
Semester/Division/Branch :	5th/Electrical		
Subject Name with code :	Utilisation of Electrical Energy & Traction/Th. 4		
Total No. of Class (Required) :	60	Page:	of
Faculty Name :	Stutee Patra	Date (Lesson Plan):	13/09/22

Class No.	Brief Description of the Topic/Chapter to be taught	Status of Course Cover (write Yes, if taught)	Sign (Faculty/LA)	Date (Course Covered)	Course Prog. Reviewed by	Remarks
1	Chapter 1: Definition & Basic principle of Electro Deposition					
1	Chapter 1: Important terms regarding electrolysis					
2	Chapter 1: Faraday's Laws of Electrolysis					
2	Chapter 1: Definition of current efficiency, energy efficiency					
3	Chapter 1: Principle of Electro Deposition					
4	Chapter 1: Factors affecting the amount of Electro					
5	Chapter 1: Factors governing the electro deposition					
6	Chapter 1: State simple example of extraction of metals					
7	Chapter 1: Application of Electrolysis					
8	Chapter 2: Electrical Heating: Advantages of Electrical					
9	Chapter 2: Mode of Heat transfer & Stephen's Law					
10	Chapter 2: Principles of Resistance Heating					
11	Chapter 2: Discuss working principle of direct arc furnace &					
12	Chapter 2: Principle of Induction Heating					
13	Chapter 2: Working principle of direct core, vertical core, I					
14	Chapter 2: Principle of coreless induction furnace & skin					
15	Chapter 2: Principle of dielectric heating & its application					
16	Chapter 2: Principle of Microwave heating & its application					
17	Chapter 3: Principle of arc welding					
18	Chapter 3: Discuss DC & AC Arc phenomenon					
19-20	Chapter 3: DC & AC Arc welding plants of single & multi-					
21	Chapter 3: Types of arc welding					
22-23	Chapter 3: Explain principles of resistance welding					
24	Chapter 3: Study of different resistance welding method					
25	Chapter 4: Nature of radiation & its spectrum					
25	Chapter 4: Terms used in illumination					
26	Chapter 4: Explain inverse square law & cosine law					
27-28	Chapter 4: Explain polar curves					
29	Chapter 4: Describe light distribution & control					
30	Chapter 4: Design simple lighting scheme & depreciation					
31	Chapter 4: Constructional features & working of filament					
31	Chapter 4: Explain Discharge lamps					
32	Chapter 4: State basic idea about excitation in gas					
33	Chapter 4: State constructional features & operation of					
34	Chapter 4: Sodium vapour lamp					
35	Chapter 4: High pressure mercury vapour lamp					
36	Chapter 4: Neon sign lamps					
36	Chapter 4: High lumen output & low consumption					

Class No.	Brief Description of the Topic/Chapter to be taught	Status of Course Cover (write Yes, if taught)	Sign (Faculty/LA)	Date (Course Covered)	Course Prog. Reviewed by	Remarks
37	Chapter 5: State group & individual drive					
38-39	Chapter 5: Method of choice of electric drives					
40	Chapter 5: Explain starting & running characteristics of DC					
41-42	Chapter 5: State application of DC motor					
43	Chapter 5: State application of 3ph Induction motor					
44	Chapter 5: State application of 3-ph Synchronous Motor					
45-46	Chapter 5: State application of 1-ph Induction motor, series					
47	Chapter 6: Explain system of traction					
48	Chapter 6: System of Track electrification					
49	Chapter 6: Running characteristic of DC & AC Traction					
50	Chapter 6: Explain control of motor: Tapped field control					
51	Chapter 6: Rheostatic control					
52	Chapter 6: Series parallel control					
53	Chapter 6: Multi - unit control					
54	Chapter 6: Metadyne control					
55-56	Chapter 6: Explain Regenerative braking					
57-58	Chapter 6: Braking with 1-ph series motor					
59-60	Chapter 6: Magnetic braking					

(Sign. of Faculty/LA)

Prepared by (Lesson Plan):

(Sign. of H.O.D/In-charge)

Stutee Patr Reviewed by (Lesson Plan):

(Sign. of Principal)

Approved by (Lesson Plan):