Bhoj Reddy Engineering College for Women: Hyderabad
Department of Electrical and Electronics Engineering
Lesson plan of faculty member for the academic year 2016–17

Class: IV B Tech Branch: **EEE** Semester: I

Subject: Utilization of Electrical Energy Lectures per week: 4+1 (Tutorial)

Lecture No	**Topics to be covered**	**Date(s)**
	UNIT -I: Electric Drives	
1	Introduction	13 June 2016
2	Types of electric drives	14 June 2016
3	Choice of motor, starting and running characteristics,	15 June 2016
4	Speed control	18 June 2016
5	Tutorial(G2,G3,G1) Problems related to drives	14,15,17June 2016
6	Temperature rise	20 June 2016
7	Particular applications of electric drives	21 June 2016
8	Types of industrial loads, continuous, intermittent and variable loads, load	22 June 2016
9	Load equalization	25 June 2016
10	Tutorial(G2,G3,G1) Problems on Rating of motors and Temperature Rise	21,22,24 June 2016
11	Problems on UNIT-1	27 June 2016
	UNIT- II: Electric Heating And Electric Welding	
12	Advantages and methods of electric heating	28 June 2016
13	Resistance heating	29 June 2016
14	Induction heating	02 July 2016
15	Tutorial(G2,G3,G1) Problems on Heating	28,29 June,1 July 2016
16	Dielectric heating	4 July 2016
17	Electric welding introduction- Types of welding	5 July 2016

18	Resistance welding	9 July 2016
19	Arc welding	11 July 2016
20	Tutorial(G2,G1) Problems on Welding	5,8 July 2016
21	Electric welding equipment, Comparison between A.C. and D.C. Welding	12 July 2016
UNIT -III: Illumination		
22	Terms used in illumination	13 July 2016
23	Laws of illumination	16 July 2016
24	Photometry	18 July 2016
25	Tutorial(G2,G3,G1) Problems on Illumination	12,13,15 July 2016
26	Polar curves ,integrating sphere	19 July 2016
27	Sources of light	20 July 2016
28	Problems on Illumination	23 July 2016
29	Discharge lamps , filament lamp working	25 July 2016
31	Tutorial(G2,G3,G1) Problems on Illumination	19 ,20,22 July 2016
32	MV and SV lamps	26 July 2016
33	Comparison between tungsten filament lamps and fluorescent tubes	27 July 2016
34	Basic principles of light control	30 July 2016
35	Types and design of lighting	2 August 2016
36	Tutorial(G2,G3,G1) Seminars	26,27,29 July 2016
38	Flood lighting, Problems	3 August 2016
39	Assignment test	6 August 2016
37	Tutorial(G2,G3,G1) Seminars	2,3,5 August 2016
UNIT IV: Electric Traction – I		
40	System of electric traction and track electrification	16 August 2016
41	Tutorial(G2,G3,G1) Problems on Traction	16,17,19 August 16
42	Review of existing electric traction systems in India.	17 August 2016

43	Special features of traction motor	20 August 16
44	Methods of electric braking-Plugging & Rheostatic	22 August 2016
45	Regenerative braking	23 August 2016
46	Tutorial(G2,G3,G1)	23,24,26 August 2016
47	Mechanics of train movement	27 August 2016
48	Speed-time curves for different services	29 August 2016
49	Trapezoidal Speed-time curves	30 August 2016
50	Quadrilateral speed time curves.	31 August 2016
51	Tutorial(G2,G3,G1) Problems on Electric Traction	30,31 August ,2 September 2016
UNIT V: Electric Traction – II		
52	Calculations of Tractive effort	3 September 16
53	Power, specific energy consumption for given run	6 September 2016
54	Problems	7 September 2016
55	Slip test	10 September 2016
56	Tutorial(G2,G3,G1) Problems on Tractive effort	6,7,9 September 2016
57	Calculations of Tractive effort	13 September 2016
58	Problems	14 September 2016
59	Assignment test	17 September 2016
60	Tutorial(G2,G3,G1) Problems	13,14,16 September 2016
61	Numericals	19 September 2016
62	Previous question papers discussion	20 September 2016
63	Problems on Electric Traction	21 September 2016
64	Effect of varying acceleration and braking retardation	24 September 2016
65	Tutorial(G2,G3,G1) Problems on Electric Traction -II	20,21,23 September 2016
66	Adhesive weight	24 September 2016
67	Coefficient of adhesion	25 September 2016
68	Problems on Coefficient of adhesion	26 September 2016

69	Power calculations	28 September 2016
70	Tutorial(G2,G3) Problems on SEC	25,26,28 September 2016
71	Effect of varying braking retardation adhesive weight	31 September 2016
72	Previous question papers discussion	1 October 2016
73	Previous question papers discussion	3 October 2016
74	Seminars	4 October 2016
75	Tutorial(G2) Problems on Adhesive weight	4 October 2016
76	Problems on all units	29 October 2016
77	Revision	31 October 2016
78	Revision of all units	1 November 2016
79	Assignment Test	2 November 2016
80	Tutorial(G2,G3) Problems on Traction-II	1,2 November 2016

Text Books:

1. Utilisation of Electric Power-by Er. R.K. Rajput, Laxmi Publications
2. Art & science of Utilization of electrical Energy –by Partab, Dhanpat Rai & Sons
3. Utilization of Electric Energy, E.Openshaw Taylor, University press
4. Utilization of Electric Power including Electric drives and Electric traction-by N.V.Suryanaranyana, New Age International (P) Limited, Publishers,1996.
5. Generation, Distribution and Utilization of electrical energy –by C.L Wadhwa, New Age International (P) Limited, Publishers, 1997.

Name and signature of the faculty: Mastanamma Y ----

Name and signature of Head of the Department: Mastanamma Y ----