

KONERU LAKSHMAIAH COLLEGE OF ENGINEERING
DEPARTMENT OF: ELECTRICAL & ELECTRONICS ENGINEERING

LESSON PLAN

Subject (with Course Code): **EE 325 Utilization of Electrical Power**
 Year & Semester: 2007-2008 III Year - 2nd Semester :: Section-B
 Prepared by: Name: Mr.Y.Subba Rao
 Designation: LECTURER

List of books consulted (prescribed in the syllabus book) :

1. A course in Electrical Power - by Soni, Gupta, Bhatnagar
2. Utilization of Electric Energy - by Open shaw Taylor
3. Utilization of Electrical Energy - by H.Partab

Additional books referred (those not mentioned in syllabus book):

1. Generation, Distribution and utilization of Electrical Energy - by CL Wadhwa
2. A course in Electrical power - by J.B.Gupta
3. A course in Electrical Power - by S.L.Uppal

Period	Unit	TOPICS TO BE COVERED	Dates
1	I	Introduction to utilization of electric power	15.11.2007
2		"	16.11.2007
3		general considerations in selecting motor power rating	17.11.2007
4		Section of motor capacity for continuous duty	19.11.2007
5		"	20.11.2007
6		Equivalent current,torque & power methods,Problem solving	22.11.2007
7		Selecting and motor capacity for short time	23.11.2007
8		Selecting motor for intermediate periodic duty	24.11.2007
9		Heating and cooling of motors	26.11.2007
10		Problem solving	27.11.2007
11		load equalisation	29.11.2007
12		Fly wheel and its applications	30.11.2007
13		Electric braking applied to DC motors	3.12.2007
14		Revision	4.12.2007
15		Revision	6.12.2007
16		Introduction to electric traction & advatages of electric traction power	7.12.2007
17		Introduction to electric traction & advatages of electric traction power	8.12.2007
18		Systems of electric traction	10.12.2007
19		Systems of electric traction	11.12.2007
20		Systems of electric traction	13.12.2007
21		Systems of track electrification	14.12.2007
22		Systems of track electrification	15.12.2007
23		Systems of track electrification	17.12.2007
24		Speed time curves of various services	18.12.2007
25		Crest speed, average speed, scheduled speed	20.12.2007
26		Factors effecting schedule speed	22.12.2007
27		Simplified speed-time curves	24.12.2007
28		Derivation to calculate Vm and D	27.12.2007
29		Trapezoidal curve and Quadrilateral curves	28.12.2007
30		Problem solving	29.12.2007
31		Mechanics of train movement	31.12.2007
32		Specific energy	1.1.2008
33		Problem solving	3.1.2008
34		Speed control	4.1.2008
35		Collectors	21.1.2008

36		Reverse current braking & Rheostatic Braking	22.1.2008
37		Regenerative braking	24.1.2008
38	II	Problem solving	25.1.2008
39		Transmission of Drive	28.1.2008
40		Revision	29.1.2008
41		Advantages of Electric heating and modes of heat	31.1.2008
42		transfer, Stefans law	1.2.2008
43		Classification of Electric heating	4.2.2008
44		Resistance heating & design of heating element	5.2.2008
45		Problem solving	7.2.2008
46		Induction heating - core type furnace	8.2.2008
47		Ajat-wyatt furnace and coreless induction furnace	9.2.2008
48		Dielectric heating	11.2.2008
49		Arc furnace & Control equipment	12.2.2008
50		Problem solving	14.2.2008
51	III	Types of welding - resistance welding	15.2.2008
52		Resistance welding	16.2.2008
53		Arc welding (Carbonate metal arc)	18.2.2008
54		Comparision of different welding and	19.2.2008
55		types of electrodes	21.2.2008
56		Light produced by excitation	22.2.2008
57		Flourescent lamps- sodium vapour lamp	23.2.2008
58		Flourescent lamps- sodium vapour lamp	25.2.2008
59		Mercury vapour lamp	26.2.2008
60		Arc lamps filament lamps	28.2.2008
61		Polar curves - effect of voltage variation	29.2.2008
62		plane angle, solid angle and different definations	3.3.2008
63		Laws of illumination	4.3.2008
64		Problem solving	6.3.2008
65	IV	Factory lighting	7.3.2008
66		Flood lighting	8.3.2008
67		Street lighting	10.3.2008
EXTRA TOPICS COVERED OTHER THAN SYLLABUS			
68		Substations classifications	11.3.2008
69		Detailed discription about the layouts	13.3.2008
70		Detailed discription about the layouts	14.3.2008
71		Selection and location of site for	14.3.2008
72		substations and equipment for substations	15.3.2008
73		Equating methods	15.3.2008