

Shree Ramkrishna Institute of Science & Technology

Lesson Plan

Name: ARITRAS CHAKRABORTY                      Designation: Lecturer.

Dept : Electrical Engg                                  Academic Year :2014-2015

Target Student: 5<sup>Th</sup> Sem EE

Subject: Electrical Design and Estimation

SL No	Subject	Period
	<u>Design and Specification:</u>	
1.	Introduction: importance of design and specifications, general idea about I.E. Rules and specifications/standards.	2
	<u>Design of a lighting scheme in large community hall and public health centre</u>	
2	I.E. Rules for interior lighting, Casing and concealed wiring, Specifications of all materials required and fixtures,	3
3	Determination of the type and number of lamps required determination of the size of the cable, determination of load on each sub-distribution boards, draw the layout/single-line diagram	4
	<u>Design of an electrical installation of machines in a workshop (Maximum 4 machines) [out of 4 machines at least 1 no. should be of 1-phase</u>	
4	I.E. rules related to Power Sub-circuit. Planning of the scheme, determination of the size of the cable.	2
5	Selection of main and motor switches, selection of DB/selection of DB comprising MCB, selection of starters, draw the layout/single-line diagram and wiring diagram	2
	<u>Design of Electrical Machine</u>	
6	Basic design principles and approaches, Specification, Magnetic and electric loading, output equations and output co-efficient- for transformer	2
7	3-phase induction motor and Alterator, main dimensions of above mentioned machines.	2
	Design of a 3-phase transformer up to 200 KVA:	
8	Magnetic circuit, core construction and design, winding design, Temp. rise, Insulation, cooling.	5

	<u>Estimation</u>	
9	Estimation procedure , Relevant I.E. Rules for: service lines and cut-out on consumer premises, earthed terminal, precautions against leakage before connection, declared voltage of supply to consumers,	3
10	point of commencement of supply, clearance above ground/from building of low and medium voltage service line.	2
11	Estimation of a four storied building	4
12	Estimation of lighting scheme of a Community hall and Public Health Centre	5
13	Estimation of electrical installation of machines (not more than four) in a workshop.	2
14	Estimation for giving 3 – phase O.H. service connections to a residential building	3
15	Estimate of an 11 KV indoor sub-station in a factory premises including an emergency power supply system	4

Total= 45 class

Signature of The faculty & date

Signature of The Respective HOD & date

Reviewed by principal & date