

Lesson Plan

Name of the Faculty:	Ms. Nisha		
Discipline:	Electrical engg.		
Semester:	4 th		
Subject:	Estimating & Costing in Electrical Engg.		
Lesson Plan Duration: 15 weeks (from January, 2018 to April2018)			
**Work Load (Lecture/Practical) per week (in hours): Lectures-04, Practicals-00			
Week	Theory		
	Lecture day	Topic(including assignment/test)	
1 st	1 st	<ul style="list-style-type: none"> Will Discuss Learning outcomes of Estimating & Costing in Electrical Engg. 	
		<ul style="list-style-type: none"> Introduction to complete syllabus of Estimating & Costing in Electrical Engg. 	
	2 nd	Unit-1: Purpose of estimating and costing,	
		<ul style="list-style-type: none"> Proforma for making estimates, Preparation of materials schedule 	
	3 rd	<ul style="list-style-type: none"> Costing, price list, Preparation of tender document 	
		4 th	<ul style="list-style-type: none"> Net price list, Market survey,
	2 nd		1 st
2 nd		<ul style="list-style-type: none"> Electrical point method and fixed percentage method, contingency, 	
		3 rd	<ul style="list-style-type: none"> Profit, purchase system,
4 th			<ul style="list-style-type: none"> Enquiries, Comparative statements
		3 rd	1 st
2 nd			
			3 rd
4 th	<ul style="list-style-type: none"> Cleat, batten, wiring, casing capping and conduit wiring, 		

4 th	1 st	<ul style="list-style-type: none"> • Comparison of different wiring systems.
	2 nd	<ul style="list-style-type: none"> • Design of wiring schemes for particular situation of domestic installation.
	3 rd	<ul style="list-style-type: none"> • Design of wiring schemes for particular situation Industrial Installation.
	4 th	<ul style="list-style-type: none"> • Selection of wires and cables,
5 th	1 st	<ul style="list-style-type: none"> • Wiring accessories used for Electrical Installation
	2 nd	<ul style="list-style-type: none"> • Use of protective devices i.e. MCB, ELCB etc.
	3 rd	<ul style="list-style-type: none"> • Use of wire-gauge and tables (to be prepared/arranged)
	4 th	<ul style="list-style-type: none"> • Revision/ queries of unit-1,2 ; • First assignment will be given
6 th	1 st	<ul style="list-style-type: none"> • Assignment –I check
		<ul style="list-style-type: none"> • Tentative 1st sessional test
		<ul style="list-style-type: none"> • Evaluation of sessional marks etc.
	2 nd	<ul style="list-style-type: none"> • Assignment –I check
		<ul style="list-style-type: none"> • Tentative 1st sessional test
		<ul style="list-style-type: none"> • Evaluation of sessional marks etc.
	3 rd	<ul style="list-style-type: none"> • Display and analysis of sessional marks
	4 th	Unit-3 Estimating & costing: 3.1 Domestic installations;
<ul style="list-style-type: none"> • description of various tests to test the wiring installation before commissioning, 		
7 th	1 st	<ul style="list-style-type: none"> • Standard practice as per IS and IE rules.
		<ul style="list-style-type: none"> • Planning of circuits, sub circuits.
	2 nd	<ul style="list-style-type: none"> • Position of different accessories,
		<ul style="list-style-type: none"> • Electrical layout of Domestic Installation
3 rd	<ul style="list-style-type: none"> • Preparing estimates including cost as per schedule rate pattern and actual market rate (for house of two room set along with layout sketch) 	
4 th	3.2 Industrial installations;	

		<ul style="list-style-type: none"> Relevant IE rules and IS standard practices,
8 th	1 st	<ul style="list-style-type: none"> Planning of installation for single phase motors of different rating.
		<ul style="list-style-type: none"> designing for single phase motors of different ratings
	2 nd	<ul style="list-style-type: none"> Estimation of installation for single phase motors of different ratings,
		<ul style="list-style-type: none"> Electrical circuit diagram for Industrial installations ,
3 rd	<ul style="list-style-type: none"> Starters for Industrial installations. 	
	<ul style="list-style-type: none"> Preparation of list of materials for Industrial installations, 	
4 th	<ul style="list-style-type: none"> Estimating and costing exercises on workshop with single-phase motor load 	
9 th	1 st	<ul style="list-style-type: none"> Estimating and costing exercises on workshop with 3-phase motor load and the light load (3-phase supply system)
	2 nd	3.3 Service line connections estimate for domestic upto 10 KW from pole to energy meter.
	3 rd	<ul style="list-style-type: none"> Service line connections estimate for Industrial loads upto 20 KW over-head connection from pole to energy meter.
	4 th	<ul style="list-style-type: none"> Service line connections estimate for Industrial loads upto 20 KW underground connections from pole to energy meter.
<ul style="list-style-type: none"> Second assignment will be given 		
10 th	1 st	<ul style="list-style-type: none"> Revision/ queries of unit-3
	2 nd	<ul style="list-style-type: none"> Assignment –II check
		<ul style="list-style-type: none"> Tentative 2nd sessional test
		<ul style="list-style-type: none"> Evaluation of sessional marks etc.
3 rd	<ul style="list-style-type: none"> Assignment –II check 	
	<ul style="list-style-type: none"> Tentative 2nd sessional test 	
	<ul style="list-style-type: none"> Evaluation of sessional marks etc. 	
4 th	<ul style="list-style-type: none"> Display and analysis of sessional marks 	
11 th	1 st	Unit-4 :-Estimating the material required 4(a):

		<ul style="list-style-type: none"> • Transmission and distribution lines overhead planning and designing of lines with different fixtures based on unit cost calculations
	2 nd	<ul style="list-style-type: none"> • Transmission and distribution lines overhead planning and designing of earthing etc.
	3 rd	<ul style="list-style-type: none"> • Transmission and distribution lines underground planning and designing of lines with different fixtures, based on unit cost calculations
	4 th	<ul style="list-style-type: none"> • Transmission and distribution lines underground planning and designing of lines with earthing etc.
12 th	1 st	4(b) Substation:
		<ul style="list-style-type: none"> • Types of substations, • substation schemes and components
	2 nd	<ul style="list-style-type: none"> • Estimate of 11/0.4 KV pole mounted substation up to 200 KVA rating,
	3 rd	<ul style="list-style-type: none"> • Methods of earthing of substations, • Key Diagram of 66 KV/11KV
		4 th
13 th	1 st	<ul style="list-style-type: none"> • Single line diagram, layout sketching of outdoor, indoor 11kV sub-station
	2 nd	<ul style="list-style-type: none"> • Single line diagram, layout sketching of outdoor, indoor 11kV sub-station
	3 rd	<ul style="list-style-type: none"> • Single line diagram, layout sketching of outdoor, indoor 33kV substation
	4 th	<ul style="list-style-type: none"> • Single line diagram, layout sketching of outdoor, indoor 33kV substation
14 th	1 st	<ul style="list-style-type: none"> • 3rd assignment will be given • Revision/ queries of unit-4
		2 nd
	3 rd	<ul style="list-style-type: none"> • Assignment –III check • Tentative 3rd sessional test

		<ul style="list-style-type: none"> • Evaluation of sessional marks etc
	4 th	<ul style="list-style-type: none"> • Display/analysis of 3rd sessional test
15 th	1 st	<ul style="list-style-type: none"> • Remedial will be taken if any shortcomings found
		<ul style="list-style-type: none"> • Previous state boards question will be carried out, any other left out topic
	2 nd	<ul style="list-style-type: none"> • Seminal/group discussion as per evaluation scheme
	3 rd	<ul style="list-style-type: none"> • Seminal/group discussion as per evaluation scheme
	4 th	<ul style="list-style-type: none"> • Seminal/group discussion as per evaluation scheme