

Lesson Plan

Name of Faculty :- **Jaipal**
Discipline :- **Electrical Engineering**
Semester :- **Fourth Semester**
Subject :- **Estimating and Costing in Electrical Engineering**

Lesson Plan Duration:- 15 Week

Week	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
1 st	1 st	Unit-1 Introduction Purpose of estimating and costing	1 st	NO PRACTICALS
	2 nd	Proforma for making estimates, preparation of materials schedule,		
	3 rd	Costing, price list, preparation of tender document (with 2-3 exercises),	2 nd	NO PRACTICALS
	4 th	Net price list, market survey, overhead charges, labour charges		
2 nd	5 th	Electrical point method and fixed percentage method,		
	6 th	Contingency, profit, purchase system, enquiries		
	7 th	Comparative statements, orders for supply, payment of bills		
	8 th	Tenders – its constituents, finalization, specimen tender.		
3 rd	9 th	REVISION UNIT-1		
	10 th	REVISION UNIT-1		
	11 th	REVISION UNIT-1		
	12 th	REVISION UNIT-1		

4 th	13 th	Unit-2 Types of wiring Cleat, batten, casing capping and conduit wiring,		
	14 th	Comparison of different wiring systems,		
	15 th	Selection and design of wiring schemes for particular situation (domestic and Industrial).		
	16 th	Selection of wires and cables, wiring accessories		
5 th	17 th	Use of protective devices i.e. Mcb, elcb etc.		
	18 th	Use of wire-gauge and tables (to be prepared/arranged)		
	19 th	REVISION UNIT-2		
	20 th	REVISION UNIT-2		
6 th	21 st	REVISION UNIT-2		
	22 nd	REVISION UNIT-2		
	23 rd	Unit-3 Estimating and Costing Domestic installations; description of various tests to test the wiring installation before commissioning,		
	24 th	Standard practice as per IS and IE rules.		
7 th	25 th	Planning of circuits, sub-circuits and position of different accessories,		
	26 th	Electrical layout, preparing estimates including cost as per schedule rate pattern and actual market rate		
	27 th	For house of two room set along with layout sketch.		
	28 th	REVISION UNIT-3(Domestic Installation)		
8 th	29 th	REVISION UNIT-3(Domestic Installation)		
	30 th	REVISION UNIT-3(Domestic Installation)		
	31 st	Industrial installations; relevant IE rules and IS standard practices,		
	32 nd	Planning, designing and estimation of installation for single phase motors of different		

		ratings,		
9 th	33 rd	Electrical circuit diagram, starters,		
	34 th	Preparation of list of materials, estimating and costing exercises on workshop with single-phase,		
	35 th	3-phase motor load and the light load (3-phase supply system)		
	36 th	Service line connections estimate for domestic upto 10 KW		
10 th	37 th	Industrial loads upto 20 KW (over-head)		
	38 th	And under ground connections from pole to energy meter		
	39 th	REVISION UNIT-3(Industrial Installation)		
	40 th	REVISION UNIT-3(Industrial Installation)		
11 th	41 st	REVISION UNIT-3(Industrial Installation)		
	42 nd	REVISION UNIT-3(Service Line Installation)		
	43 rd	REVISION UNIT-3(Service Line Installation)		
	44 th	REVISION UNIT-3(Service Line Installation)		
12 th	45 th	Unit-4 Estimating the material required for Transmission and distribution lines (overhead) planning and designing of lines with different fixtures, earthing etc.		
	46 th	Transmission and distribution lines (underground)planning and designing of lines with different fixtures, earthing etc.		
	47 th	Based on unit cost calculations		
	48 th	Substation: Types of substations,		
	49 th	Substation schemes		

13th	50th	Components, estimate of 11/0.4 KV pole mounted substation up to 200 KVA rating,		
	51st	Methods of earthing of substations, Key Diagram of 66 KV/11KV		
	52nd	Key Diagram of 11 KV/0.4 KV Substation.		
14th	53rd	Single line diagram of 11kv sub-station		
	54th	Single line diagram 33kv sub-station		
	55th	Layout sketching of outdoor 11Kv		
	56th	Layout sketching of indoor 33Kv		
15th	57th	REVISION UNIT-4		
	58th	REVISION UNIT-4		
	59th	REVISION UNIT-4		
	60th	REVISION UNIT-4		