

## Lesson Plan

Name of Faculty : Sh. SOHAN SHARMA  
 Discipline : ELECTRICAL ENGG.  
 Semester : 4th  
 Subject : Estimating and Costing in Electrical Engg (E & C)  
 Lesson Plan Duration : 15 Weeks (From : 20-01-2025 to 02-05-2025)

Week	Theory		Practical
	Lecture Day	Topic	Topic
1 <sup>st</sup>	1 <sup>st</sup>	<b>Unit-1 Essentials of Estimation and Costing</b> <b>Introduction:</b> Purpose of estimating and costing, Performa for making estimates.	Prepare a tender notice for purchasing a transformer of 200 KVA for commercial installation.
	2 <sup>nd</sup>	Preparation of materials schedule, costing and price list.	
	3 <sup>rd</sup>	Net price list, market survey, overhead charges and labour charges.	
2 <sup>nd</sup>	4 <sup>th</sup>	Electrical point method and fixed percentage method.	Revision and File Checking
	5 <sup>th</sup>	Contingency, profit	
	6 <sup>th</sup>	<b>Tender and Quotations:</b> Types of Tender, Tender Notice	
3 <sup>rd</sup>	7 <sup>th</sup>	Preparation of Tender document, and method of opening of tender,	Prepare a quotation for purchasing different electrical material required
	8 <sup>th</sup>	Quotation - quotation format, comparison between tender and quotation,	
	9 <sup>th</sup>	Comparative statement, Format comparative statement, Earnest money deposit (EMD), Purchase System	
4 <sup>th</sup>	10 <sup>th</sup>	Order for supply, payment of bills. and Revision Unit - I	Revision and File Checking
	11 <sup>th</sup>	Notebook Check/Doubts/Assignment/Class Test	
	12 <sup>th</sup>	<b>Unit - II : Domestic Installation:</b> <b>Wiring and Accessories:</b> Introduction, Types of Wiring:	
5 <sup>th</sup>	13 <sup>th</sup>	Types—Cleat, batten, casing capping and	Viva Voce
	14 <sup>th</sup>	Conduit wiring	

	15th	Comparison of different wiring systems.	
6th	16th	Selection and design of wiring schemes for particular situation (domestic and industrial).	Prepare a comparative statement for above material. Prepare purchase order for the same
	17th	Selection of wires and cables, Wiring accessories	
	18th	Use of Protective devices i.e. MCB and ELCB, Use of wire-gauge and tables	
7th	19th	<b>Domestic Installation:</b> Standard practice as per IS and IE rules	Revision and File Checking
	20th	Planning of circuits, sub-circuits and Position of different accessories.	
	21st	Electrical layout	
8th	22nd	Preparing estimates including cost as per schedule rate pattern and actual market rate. (single storey and multi-storey buildings having similar electrical load)	Prepare an estimate for a Two Room residential building as per given plan.
	23rd	Revision Unit - II	
	24th	Notebook Check/Doubts/Assignment/Class Test	
9th	25th	<b>Unit - III Industrial installations:</b> relevant IE rules and IS standard practices.	Revision and File Checking
	26th	Planning, designing and estimation of installation of single phase motors of different ratings.	
	27th	Electrical circuit diagram and starters, Preparation of list of materials	
10th	28th	Estimating and costing exercises on workshop with single-phase, 3-phase motor load and the light load (3-phase supply system).	Viva Voce
	29th	Design electrical installation scheme of factory/small industrial unit, preparation of material schedule and detailed estimation.	
	30th	Revision Unit - III	
	31st	Notebook Check/Doubts/Assignment/Class Test	

11th	32nd	<b>Unit - IV: Street Lighting Installation:</b> Classification of outdoor installation streetlight/public lighting installation	Prepare an estimate for service connection for residential building having connected load KW.
	33rd	Street Light pole structure. Selection of equipments, sources used in street light installations.	
12th	34th	Cables recommended types and sizes of cable.	Revision and File Checking
	35th	Control of street light installations.	
	36th	Design. Estimation and costing of streetlight,	
13th	37th	Preparation of Tenders.	Viva Voce
	38th	Revision Unit - IV	
	39th	Notebook Check/Doubts/Assignment/Class Test	
14th	40th	<b>Unit - V Distribution Line and LT Substation:</b> Transmission and distribution lines.	Estimate with a porposal of the L.T. line installation . Prepare report and draw sheet.
	41st	Planning and designing of lines with different fixtures,	
	42nd	Earthing etc. based on unit cost calculations.Service line connections estimate for domestic	
15th	43rd	Industrial loads from pole to energy meter.Substation: Types of sub-stations, Substation schemes and components,	Visit a nearby substation and list the components with diagram. Revision and File Checking
	44th	Substation schemes and components,	
	45th	Estimate of 11/0.4 KV pole mounted sub-station up to 200 KVA rating,Earthing of substations	