

**LESSON  
PLAN**

<b>Faculty</b>	:Gulvender		
<b>Discipline</b>	: ELECTRICAL ENGINEERING		
<b>Semester</b>	: 4th		
<b>Subject</b>	: ECEE		
<b>Duration</b>	<b>15 Weeks (from 15 January 2026 to 30 April 2026)</b>		
<b>Work Load (Lecture) per week (in hours)</b>	:Theory- 03; Practical:02		
<b>Week</b>		<b>Theory</b>	
	<b>Lecture Day</b>	<b>Topic</b>	
<b>1st</b>	<b>1st</b>	Introduction to the subject and the marks distribution	Introduction to the subject and the marks distribution
	<b>2nd</b>	Essentials of Estimation and Costing	
	<b>3rd</b>	1.1 Introduction :Purpose of estimating and costing, proforma for making estimates	
<b>2nd</b>	<b>1st</b>	preparation of materials schedule, costing, price list, net price list, market survey, overhead charges, labour charges, electrical point method and fixed percentage method, contingency, profit	1. Prepare a tender notice for purchasing a transformer of 200 KVA for commercial installation.
	<b>2nd</b>	1.2 Tenders and Quotations-Type of tender, tender notice, preparation of tender document, and method of opening of tender	
	<b>3rd</b>	, Quotation-quotation format, comparison between tender and quotation, Comparative statement, format comparative statement	
<b>3rd</b>	<b>1st</b>	Earnest money deposit (EMD), purchase system, orders for supply, payment of bills	2. Prepare a quotation for purchasing different electrical material required.
	<b>2nd</b>	Domestic Installation 2.1 Wiring and accessories: Introduction, types of wiring: Cleat, batten, casing capping and conduit wiring,	
	<b>3rd</b>	comparison of different wiring systems, selection and design of wiring schemes.	
<b>4th</b>	<b>1st</b>	Selection of wires and cables, wiring accessories and use of protective devices i.e. MCB, ELCB etc.	3. Prepare a comparative statement for above material. Prepare purchase order for the same.
	<b>2nd</b>	Use of wire-gauge and tables (to be prepared/arranged).	
	<b>3rd</b>	Domestic installations: standard practice as per IS and IE rules	
<b>5th</b>	<b>1st</b>	Planning of circuits, sub-circuits and position of different accessories, electrical layout,	4. Prepare an estimate for a Two room residential building as per given plan.
	<b>2nd</b>	preparing estimates including cost as per schedule rate pattern and actual market rate	
	<b>3rd</b>	(single story and multi- story buildings having similar electrical load).	
<b>6<sup>th</sup></b>	<b>1st</b>	Industrial installations: relevant IE rules and IS standard practices,	Quiz No. 01 and Viva Voce
	<b>2nd</b>	planning, designing and estimation of installation for single phase motors of different ratings,	
	<b>3rd</b>	electrical circuit diagram, starters, preparation of list of materials,	
	<b>1st</b>	estimating and costing exercises on workshop with single-phase	5. Design electrical installation scheme for
	<b>2nd</b>	3-phase motor load and the light load (3-phase supply system).	

7th	3rd	Design electrical installation scheme of factory/ small industrial unit	any one factory / small industrial unit. Draw detailed wiring diagram. Prepare material schedule and detailed estimate. Prepare report and draw sheet
8th	1 <sup>st</sup>	Preparation of material schedule.	Continued
	2 <sup>nd</sup>	Preparation of detailed estimation.	
	3 <sup>rd</sup>	Street Lighting Installation	
9th	1 <sup>st</sup>	Classification of outdoor installations streetlight	6. Estimate with a proposal of the electrical Installation of streetlight scheme for small premises after designing.
	2 <sup>nd</sup>	public lighting installation,	
	3 <sup>rd</sup>	Street light pole structures.	
10th	1 <sup>st</sup>	Selection of equipments, sources used in street light installations.	7. Prepare an estimate for service connection for residential building having connected load kW.
	2 <sup>nd</sup>	Cables, recommended types and sizes of cable.	
	3 <sup>rd</sup>	Control of street light installation.	
11th	1 <sup>st</sup>	Design, estimation and costing of streetlight,	Quiz No. 02 and Viva Voce
	2 <sup>nd</sup>	Preparation of tenders of streetlight	
	3 <sup>rd</sup>	Distribution Line and LT Substation	
12th	1 <sup>st</sup>	Transmission and distribution lines (overhead and underground)	8. Estimate with a proposal of the L.T. line installation. Prepare report and draw sheet.
	2 <sup>nd</sup>	planning and designing of lines with different fixtures,	
	3 <sup>rd</sup>	earthing etc. based on unit cost calculations	
13th	1 <sup>st</sup>	Service line connections estimate for domestic loads (overhead) from pole to energy meter.	9. Estimate with a proposal of the 500 KVA, 11/0.433 KV outdoor substation and prepare a report. 10. Visit a nearby substation and list the components with diagram
	2 <sup>nd</sup>	Service line connections estimate for domestic loads (underground connections) from pole to energy meter.	
	3 <sup>rd</sup>	Service line connections estimate for industrial loads (overhead ) from pole to energy meter.	
14th	1 <sup>st</sup>	Service line connections estimate for industrial loads (underground connections) from pole to energy meter.	Internal assessment and Viva Voce
	2 <sup>nd</sup>	Substation: Types of substations	
	3 <sup>rd</sup>	Substation: substation schemes	
15th	1 <sup>st</sup>	Substation: components	Internal assessment and Viva Voce
	2 <sup>nd</sup>	estimate of 11/0.4 kV pole mounted substation up to 200 kVA rating, earthing of substations.	
	3 <sup>rd</sup>	Revision	