

**R.G. Government Polytechnic Banikhet, Distt. Chamba (H.P)-176303**  
**Department of Electrical Engineering**  
**Lesson Plan**

Name of Faculty	Ms. Divya
Discipline	Electrical Engineering
Semester	6th
Subject	Estimating & Costing in Electrical Engineering (L-4 Hrs./Week)
Lesson Plan Duration	February – June 2023

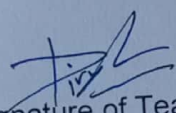
week	Topic	Theory
1 <sup>st</sup> (14 Feb. – 21 Feb.)	1. Introduction	Estimating, Purpose of estimating and costing, proforma for making estimates, catalogue, costing, price list, tender document
2 <sup>nd</sup> (22 Feb. – 28 Feb.)	1. Introduction	Net price list, market survey, overhead charges, labor charges, electrical point method and fixed percentage method, contingency
3 <sup>rd</sup> (01 Mar. – 07 Mar.)	1. Introduction	Profit, purchase system, enquiries, comparative statements, orders for supply, payment of bills. Tenders – it's constituents, types and procedure
4 <sup>th</sup> (09 Mar. – 16 Mar.)	2. Wiring Systems and Protection Devices	Cleat, batten, casing capping and conduit wiring, comparison of different wiring systems.
5 <sup>th</sup> (17 Mar. – 23 Mar.)	2. Wiring Systems and Protection Devices	Selection and design of wiring schemes for particular situation (Domestic and Industrial).  Selection of wires and cables, wiring accessories.
Class Test – 1	<b>In Third Week of March</b>	
6 <sup>th</sup> (24 Mar. – 31 Mar.)	2. Wiring Systems and Protection Devices	Use of protective devices such as fuse, MCB, ELCB and their selection. Use of wire-gauge and tables.
7 <sup>th</sup> (01 Apr. – 10 Apr.)	3. Estimating and Costing of Domestic & Industrial Electrical Installations	Domestic installations: Standard practices as per IS and IE rules. Planning of circuits, sub-circuits and position of different accessories.

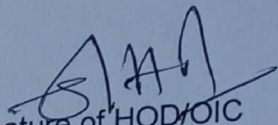
8 <sup>th</sup> (11 Apr. – 19 Apr.)	3. Estimating and Costing of Domestic & Industrial Electrical Installations	Electrical layout, preparing estimates including cost as per schedule rate pattern and actual market rate. Industrial installations: relevant IE rules and standard practices, planning, designing.
9 <sup>th</sup> (20 Apr. – 27 Apr.)	3. Estimating and Costing of Domestic & Industrial Electrical Installations	Estimation of installation for single phase motors of different ratings, electrical circuit diagram, starters, preparation of list of materials
10 <sup>th</sup> (28 Apr. – 04 Apr.)	3. Estimating and Costing of Domestic & Industrial Electrical Installations	Estimating and costing exercises on workshop with single-phase, 3-phase motor load and the lighting load (3phase supply system). Service line connections estimate for domestic and Industrial loads (overhead and Under- ground connections) from pole to energy meter.
11 <sup>th</sup> (06 May – 12 May)	3. Estimating and Costing of Domestic & Industrial Electrical Installations	Earthing Systems Estimation: IS specifications regarding earthing, types of earthing, List of materials required for earthing Design of earth wire/strip and electrode for domestic and industrial installation.
12 <sup>th</sup> (15 May – 20 May)	4. Estimating of Transmission/Distribution Lines & Substations	Transmission & distribution lines (overhead & underground ) planning & designing of lines with different fixtures, based on unit cost calculations.
Class Test -2	In Third Week of April 2023.	
13 <sup>th</sup> (23 May-29 May)	4. Estimating of Transmission/Distribution Lines & Substations	Substation: Types of substations, substation schemes and components. estimate of 11/0.4 kV pole mounted substation up to 200 kVA rating
14 <sup>th</sup> (30 May-05 June)	4. Estimating of Transmission/Distribution Lines & Substations	Earthing of substations, Key Diagram of 66 kV/33kV/11kV Substation
House Test	In Second Week of May 2023.	

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15 <sup>th</sup> (06 June - 09 June)	Revision and doubt clearance	Revision and doubt clearance.
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NOTE: - Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

  
Signature of Teacher  
(Er. Divya)

  
Signature of HOD/OIC  
(Er. Amit Attri)

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