

LESSON PLAN

Name of Teacher: Vivek Sheel Verma

Branch: Electrical Engg.

Name of subject: Estimating & Costing in Electrical Engg.

Semester: 6th

Week	Chapters Covered	Topic Covered	Conclusion	Reference
1st	1	Introduction Estimating, Purpose of estimating and costing, proforma for making estimates, catalogue	Students will learn about the basics of estimation and other related terms.	Estimating and Costing by Surjeet Singh, Dhanpat Rai & Co., New Delhi
2nd	1	costing, price list, tender document, net price list, market survey, overhead charges, labor charges, electrical point method and fixed percentage method	Students will learn the various terms related to estimation	A Course in Electrical Installation, Estimating and Costing by J.B. Gupta, SK Kataria and Son (KATSON), New Delhi
3rd	1	contingency, profit, purchase system, enquiries, comparative statements, orders for supply, payment of bills. Tenders – it's constituents, types and procedure.	Students will have the knowledge about tender and purchase systems	Electrical Design, Estimating and Costing by K. B. Raina & S. K. Bhattacharya, McGraw Hill Book Company, New Delhi
4th	2	Wiring Systems and Protection Devices Cleat, batten, casing capping and conduit wiring, comparison of different wiring systems	Different wiring schemes used will be beneficial for the students	Estimating and Costing by Surjeet Singh, Dhanpat Rai & Co., New Delhi
5th	2	selection and design of wiring schemes for particular situation (domestic and Industrial). Selection of wires and cables	Students will learn about the selection of wires and cables used in domestic and industrial applications.	Electrical Design, Estimating and Costing by K. B. Raina & S. K. Bhattacharya, McGraw Hill Book Company, New Delhi
6th	2	wiring accessories and use of protective devices such as fuse, MCB, ELCB and their selection. Use of wire-gauge and tables	Students will learn the concepts of MCB and RCCB	Estimating and Costing by Surjeet Singh, Dhanpat Rai & Co., New Delhi
7th	3	Estimating and Costing of Domestic & Industrial Electrical Installations Domestic installations: Standard practices as per IS and IE rules	Students will learn basic rules and standards used for domestic installations	Estimating and Costing by Surjeet Singh, Dhanpat Rai & Co., New Delhi
8th	3	Planning of circuits, sub-circuits and position of different accessories, electrical layout, preparing estimates including cost as per schedule rate pattern and actual market rate	Students will learn to make estimates for the domestic installations	Estimating and Costing by Surjeet Singh, Dhanpat Rai & Co., New Delhi
9th	3	Industrial installations: relevant IE rules and standard practices, planning, designing and estimation of installation for single phase motors of different ratings, electrical circuit diagram, starters, preparation of list of materials, estimating and costing exercises on workshop with single-phase, 3-phase motor load and the lighting load	Students will learn basic rules and standards used for various industrial installations	Electrical Design, Estimating and Costing by K. B. Raina & S. K. Bhattacharya, McGraw Hill Book Company, New Delhi

10th	3	Service line connections estimate for domestic and Industrial loads (over-head and Under- ground connections) from pole to energy meter	Students will learn to make estimates for the service wire connections.	A Course in Electrical Installation, Estimating and Costing by J.B. Gupta, SK Kataria and Son (KATSON), New Delhi
11th	3	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.	Concept of earthing and various designs used for industrial and domestic installation will be understood by the students.	A Course in Electrical Installation, Estimating and Costing by J.B. Gupta, SK Kataria and Son (KATSON), New Delhi
12th	4	Estimating of Transmission/Distribution Lines & Substations Transmission and distribution lines (overhead and underground) planning and designing of lines with different fixtures, based on unit cost calculations	Students will learn to make estimates for the transmission and distribution lines.	Electrical Estimating and Costing by N. Magappan and B. Ekambaram, TMH, New Delhi
13th	4	Substation: Types of substations, substation schemes and components	Students will learn about substation and its various components.	Estimating and Costing by Surjeet Singh, Dhanraj Pal & Co., New Delhi
14th	4	Estimate of 11/0.4 kV pole mounted substation up to 200 kVA rating, earthing of substations, Key Diagram of 66 kV/33kV/11kV Substation	Students will learn about estimation of a pole mounted substation as well as key diagram of 66 kV/33kV/11kV Substation.	Estimating and Costing by Surjeet Singh, Dhanraj Pal & Co., New Delhi

Prepared By

VIVEK SHEEL VERMA

Head of Department

(Signature)
 (Ac. Et.)