

Th4. ESTIMATION & COST EVALUATION – I

Name of the Course: Diploma in Civil Engineering			
Course code:		Semester	4 th
Total Period:	60	Examination	3 hrs
Theory periods:	4P/week	Class Test:	20
Maximum marks:	100	End Semester Examination:	80

A. RATIONALE

The course enables the students to be ready to act as estimator and prepare necessary plans before construction satisfying the requirements imposed by different regulatory bodies. Further, the course helps them realize the organizational hierarchy and professional roles.

B. COURSE OBJECTIVES

On completion of the course, students will be able to –

1. Understand the significance of accurate estimation practices.
2. Evaluate and generate component wise estimates for a building
3. Develop a proper cost estimate for single storeyed building.
4. Analyse and offer reason behind the costs involved in different components
5. Prepare abstract of cost estimates in line with prescription by state regulating bodies.
6. Realize the levels existing in organization and comprehend the roles and responsibilities at different levels.

C. TOPIC WISE DISTRIBUTION

Chapter	Name of topics	Hours
1	Introduction :	02
2	Quantity Estimate of Building	30
3	Analysis of Rates and Valuation.	22
4	Administrative Set-Up of Engineering Organisations	04

D. COURSE CONTENTS:

1 Introduction

- 1.1 Types of estimates – Plinth area, floor area / carpet area
- 1.2 Units and modes of measurements as per IS 1200

1.3 Accuracy of measurement for different item of work

2 Quantity Estimate of Building

2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.

2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mummy room.

3 Analysis of Rates and Valuation

3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD.

3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)

3.3 Abstract of cost of estimate.

3.4 Valuation- Value and cost, scrap value, salvage value, assessed value, sinking fund, depreciation and obsolesce, methods of valuation.

4 Administrative Set-Up of Engineering Organisations:

4.1 Administrative set-up and hierarchy of Engineering department in State Govt./Central Govt./PSUs/Private Sectors etc. Duties and responsibilities of Engineers at different positions /levels.

E. Course Coverage up to Internal Assessment: Chapters 1, 2

F. Recommended Books

Sl. No	Name of Authors	Titles of Book	Name of Publisher
1	M.Chakraborty.	Estimating, Costing, specification &Valuation in Civil Engineering	Published by author
3	B.N.Dutta	Estimating &Costing	UBSPD
4	A. Panigrahi	Accounts & contracts	Vikas Publication
5	Govt. of Odisha	Latest Orissa PWD Schedule of Rates & Analysis of rates	Govt. of Odisha

B: The use of schedule and analysis of rates of Govt. of Odisha is allowed in the end examination.