

4/4 B.Tech. SEVENTH SEMESTER

CE7T3

ESTIMATION AND COSTING

Credits: 4

Lecture: 3 periods/week

Internal assessment: 30 marks

Practice: 3 periods/week

Semester end examination: 70 marks

Objectives:

- To prepare estimates of buildings including R.C.C. members and roads, culverts and bridges
- To gain knowledge of rate analysis
- To get an exposure to field problems associated with roads / bridge marking and estimation of roadwork quantities

Learning outcomes:

At the end of course the student will be able to

- Prepare the detailed estimates on general items of buildings through long wall & short wall method and centre line method considering standard specifications and analysis of rates.
- Quantify the earthwork in roads & canals and reinforcement bar bending & requirement scheduling.
- Understand contracts and valuation.

UNIT – I

General items of work in Building – Standard Units Principles of working out quantities for detailed and abstract estimates – Approximate method of Estimating.

UNIT – II

Detailed Estimates of Buildings.

UNIT – III

Earthwork for Roads and Canals.

UNIT – IV

Rate Analysis – Working out data for various items of work over head and contingent charges.

UNIT-V

Reinforcement bar bending and bar requirement schedules.

UNIT – VI

Contracts – Types of contracts – Contract Documents – Conditions of contract

UNIT – VII

Valuation of buildings.

UNIT – VIII

Standard specifications for different items of building construction.

Learning resources

Text books:

1. Estimating and Costing, (23rd edition) by Dutta, B.N., UBS Publishers, 2010.
2. Estimating and Costing, (6th edition) by Birdie, G.S., Jain Book Depot. 2012.

Reference books:

1. Standard Schedule of rates and standard data book by Public Works Department, 2/3/2009 adopted from 1/7/2009.
2. IS:1200, Parts I to XXV – 1974 / method of measurement of building and Civil Engineering works, B.I.S.
3. Estimation, Costing and Specifications, (25th edition) by Chakraborti M., Laxmi Publications, National Building Code, 2012.