

*PROJECT ESTIMATION AND CONTRACTS (11-CE307)*

Pre – requisite: 11-CE203

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**SYLLABUS**

**Procedure of Estimating:** Methods of estimating; Main items of work; Deduction for openings; Degree of accuracy. **Methods of Building Estimates:** Individual wall method; Centre line method; Arch masonry calculation; **Estimate of RCC works:** Estimate of RCC slab; RCC beam and RCC column with foundation. **Road Estimating:** Estimate of earthwork; Estimate of pitching of slopes; Estimate of earthwork of road from longitudinal sections; Estimate of earthwork in hill roads. **Canal Estimate:** Earthwork in canals—different cases; Breached sections/Breach closures. **Specifications:** Purpose and method of writing specifications; Detailed Specifications for Brick work; R.C.C; Plastering; Mosaic Flooring; R. R. Stone Masonry. **Analysis of Rates:** Preparing analysis of rates for the following items of work: i) Concrete ii) RCC Works iii) Brick work in foundation and super structure iv) Plastering. preparing lead statements.

**PWD accounts and procedure of works:** Organization of Engineering department; Work charged establishment; Contract; Tender; Tender notice; Tender Schedule; Earnest money; Security money; Measurement book; Administrative approval; Technical sanction; Plinth area; Floor Area; Carpet area; Approximate Estimate; Plinth area estimate; Revised Estimate; Supplementary estimate, cash flow allocations yearly.

**Valuation:** Cost; Price & value; Methods of valuation; Out goings; Depreciation; Methods for estimating cost depreciation; Valuation of building

**Contracts:** Contract: types of contracts, Contract Law, EMD, Tenders, Acceptance of Contract, Breach of Contract, Cancellation of Contract, arbitration ,Re-tendering – work order, running payment, Final Bill, Completion Certificate.

**TEXT BOOKS:**

1. Estimating & Costing in Civil Engineering by B.N. Dutta; U. B. S. Publishers & Distributors, New Delhi.
2. Valuation of Real properties by S. C. Rangwala; Charotar Publishing House, Anand.

**REFERENCE BOOKS:**

1. Estimating & Costing by M. Chakraborty, S Chand Publishing House.

**LABORATORY:**

Estimate the following

1. Building
2. Road works
3. Water head tank
4. Bridge
5. Culverts
6. underpass