

QUANTITY SURVEYING AND COST ESTIMATION

Paper Code: ETCE-306

Paper: Quantity Surveying and Cost Estimation

L	T/P	C
3	1	4

INSTRUCTIONS TO PAPER SETTERS:

Maximum Marks: 75

1. Question No. 1 should be compulsory and cover the entire syllabus. This question should have objective or short answer type questions. It should be of 25 marks.
2. Apart from Question No. 1, rest of the paper shall consist of four units as per the syllabus. Every unit should have two questions. However, student may be asked to attempt only 1 question from each unit. Each question should be 12.5 marks.

***Objective:** To learn the fundamentals of estimation of different types of civil engineering structures, analysis of rates and valuation concepts. The course also deals with different method of depreciation and valuation of properties including case studies.*

UNIT-1

Estimating Principle: Method of estimating, Main items of work, Deduction for openings, R.C.C. and R.B. work, Estimation for Flooring, Roofing, Plastering, Pointing Cornice, Doors, Windows, Wood Work, Iron Work, Aluminum work and Lump sum items

Earthwork Calculations: Calculation of areas, Measurement of earthwork, Determination of Earthwork for reservoirs from contour map.

[T1][No. of Hours: 11]

UNIT-II

RCC works and Structure: Estimate of RCC Slab, beam, T beam, Column with foundation, staircase, retaining wall etc.

Road Estimating: Earthen, WBM and RCC roads, Premix carpeting, Stabilized soil road, Modernization of a road.

[T2][No. of Hours: 11]

UNIT-III

Analysis of Rates for building work: Purpose and principal factors affecting the rate of an item of work, overhead costs, Materials for brick masonry, stone masonry, cement concrete, cement mortar, Plastering, different types of flooring, floor finish, color washing, distemper, varnish, painting, items for sanitary work, wood work, preparing analysis of rates.

Analysis of Rates for Road works: Bituminous painting 1st and 2nd coats, Premix carpet, bituminous macadam, Laying and Consolidation of stone metal and Kankar material. Itemized rates as per DSR [Delhi Schedule of Rates.

[T1,T2][No. of Hours: 11]

UNIT –IV

Depreciation: Different methods of calculating depreciation-straight line method, declining balance method, sinking fund method, quantity Survey method, Depreciated Cost, Case Studies

Valuation: Cost of engineering services, rent fixation, valuation of properties, methods of valuation, book value, market value, profit and loss, scrap value, salvage value, Evaluation of projects, Annual cost method, rate of return method, benefit cost ratio method, Case Studies.

[T1,R5][No. of Hours: 12]

Text Books:

[T1] B. N. Dutta- Estimating and costing in Civil Engg, UPSPD.

[T2] M .Chakraborty, “Estimating costing and Specifications in Civil Engg”,

References:

[R1] D.S.R. [Delhi Schedule Rates] C.P.W.D

[R2] PWD Account Code

[R3] Samuelson and Nardhaus-Economics, Mc Graw Hill

[R4] ‘Text book of Estimating and Costing’ by G.S.Birdie

[R5] ‘Civil Engineering Building Drawing’ by Gurucharan Singh