INSTITUTE	**FACULTY OF TECHNOLOGY**
PROGRAM	**BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)**
SEMESTER	**6**
COURSE TITLE	**PROFESSIONAL PRACTICE & VALUATION**
COURSE CODE	**01CI1604**
COURSE CREDITS	**4**

Objective:

1 To work out the Quantity of material required for various activities of the construction
2 To acquaint the students with concept of Valuation, depreciation and sinking fund
3 To understand how the rates of individual item of work is calculated.
4 To prepare abstract sheet and bill of quantities for a project

Course Outcomes: After completion of this course, student will be able to:

1 Develop approximate and detailed quantity estimation of general building quantities from the given plan.
2 Estimate the quantity of RCC elements for various structures
3 Analyze rates of various items of civil engineering structures
4 Appraise the valuation of a building structure

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	1	0	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	**Estimation** Definition – Estimation, Estimate, Types of Estimates, Role of Estimator, Purpose of Estimation, Methods of Estimation, Quantity Calculation for Residential Building - Quantity estimation of Excavation, PCC, DPC, Brickwork in foundation and plinth, Brickwork in superstructure, Plastering, Painting, Flooring, RCC, Advanced Quantity Estimation - Calculation of quantities of various items of civil works for industrial buildings, Highway, Dam, Culvert, Roads etc., Abstract and Billing - Purpose of abstract, preparation of abstract, measurement and billing, checking of running bills and final bill	18

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Contents : Unit	Topics	Contact Hours
2	**Rate Analysis** Definition - Rate analysis, Factors affecting rate analysis, overhead expenses, procedure for rate analysis, schedule of rates, Definition of task, Market Survey - Determination of manpower and material requirement for a given quantity of items of civil works, study of present wages of labour and prices of traditional and modular materials in the market., Item rate Calculation - Study of market rates of different construction tools, plants, equipments, Labour rates as per the Schedule of rates. Determination of rate of different items of civil work. Working out rates of various items of civil works	10
3	**Valuation** Definition - Value, Price and Cost, Depreciation, sinking fund, different type of values and their significance, factors affecting value, rent and standard rent, Leasehold and freehold property, obsolescence, Gross income, Outgoing and Net income, Capitalized value and Years purchase, valuation tables, Types of Depreciation – Straight line, Percentage rate, Sinking Fund, Calculation of Total Income – Gross Income, Net Income, Outgoings. Methods of valuation of buildings and land, Estimation of values of different types of buildings and lands.	14
Total Hours		**42**

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**Tutorial-1** Calculation and conversion of units of measurement	1
2	**Tutorial-2** Quantity calculation of civil works in residential building based on working drawings	4
3	**Tutorial-3** Quantity calculation of RCC elements along with the preparation of the Bar Bending Schedule	3
4	**Tutorial-4** Rate analysis for different items of work in building construction	3
5	**Tutorial-5** Calculation of depreciation using different methods	3
Total Hours		**14**

Textbook :

1 Estimation and Costing in Civil Engineering, B. N. Dutta, Ubs Publishers Distributors, Ltd, .

References:

1 Estimating and Costing, Estimating and Costing, S. C. Rangwal, Charotar Publishing House, .

2 Professional Practice and Valuation, Professional Practice and Valuation, A. S. Kotadia, Mahajan Publications, .

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking / Creative**
5.00	10.00	35.00	30.00	15.00	5.00

Instructional Method:

1 At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.

2 Lectures will be taken in class room with the use of multi-media presentations, white board – mix of both.

3 Attendance is compulsory in lectures and laboratory which carries a 5% component of the overall evaluation

4 Minimum two internal exams will be conducted and average of two will be considered as a part of 15% overall evaluation

5 Assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular interval. It carries a weightage of 5%.

6 Surprise tests/Quizzes will be conducted which carries 5% component of the overall evaluation

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