Marwadi University

Syllabus for Diploma Engineering

Civil Engineering

Semester – V

Subject Name: Quantity Survey and Valuation

Subject Code: 09CI1502

Diploma Branches in which this subject is offered: Civil Engineering

Objective: The purpose of including this subject is:

- To understand how cost of the structure is calculated.
- To be aware about the general rates of material as well as labour in market.
- To take out material estimation for different structures.
- To valuate any building based on its condition and market importance.
- This subject helps student to understand the concept used on site.

Credits Earned: 4

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

- Learn various types of estimates used in civil engineering
- Learn to take out estimation of material
- Learn to take out labour cost and overall cost of structure
- Learn various methods of rate analysis
- Evaluate actual value of property.

Pre-requisite of course: Concrete technology, Civil engineering Material, Design of R.C.C structure

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	Term work	
2	0	4	4	50	30	20	25	25	150

Contents:

Unit	Topics	Contact Hours	Weightage (%)
1	**Area and volume** • Area and volume of various shapes used in civil engineering Area of the triangle, rhombus, parallelogram, trapezoid and various other shapes, • Volume of cube, cuboid, pyramid, frustum of pyramid Cone, frustum of cone and various other shape used in foundation	3	11
2	**Estimation and modes of measurement** • Qualities of good estimator, various types of estimates Various factors affecting estimation of building • Various modes of measurement, different items and units of measurement • Market rates of material and labor, Introduction to schedule of rates	8	28
3	**Specification** • Definition, importance of specification, Types of specification • Care to be taken while drafting specifications, Drafting general specifications, • Detailed specifications for various civil work items	3	11
4	**Rate analysis** • Task work and factors affecting rate analysis • Labor requirement for different item of works • Rate analysis for earthwork in excavation, C. C. Work, Brick masonry Work, R.C.C. Work, Plastering, flooring work	7	25
5	**Valuation** • Definitions of value, price and cost • depreciation, sinking fund different type of values and their significance • Methods of valuation of buildings and land, Estimation of values of different types of buildings and lands	7	25

List of Tutorials:

Sr. No.	Name of Topics	Contact Hours
1	**Area and volume**	
	Area of various shapes important in construction	**4**
	Volume of various shapes used in construction	**4**
2	**Estimation and modes of measurement**	
	long wall &Short wall method	**8**
	centre line method	**8**
	Schedule of rates	**2**
3	**Specification**	
	Definition, importance of specification in construction project	**2**
	Specification of different types works in civil engineering	**4**
4	**Rate analysis**	
	Rate analysis of different works	**8**
	Various cost of materials and types of labour	**2**
	Contractors profit and extra charges	**2**
5	**Valuation**	
	Valuation of different construction equipment	**2**
	Various methods of calculating Depreciation	**4**
	Valuation of land and buildings	**2**
	Example on years purchase	**4**
TOTAL		**56**

Suggested Theory distribution:

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

Distribution of theory for course delivery and evaluation					
Remember	Understand	Apply	Analyse	Evaluate	Create
35%	40%	15%	10%	0%	0%

Instructional Method:

a. The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, Quiz, brainstorming.

b. The internal evaluation will be done on the basis of continuous evaluation of students in the class-rooms

References:

Sr no.	Author	Title of books	Publication
1	B. N. Dutta	Estimation and costing in civil engineering	UBSPD
2	D. D. Kohli R.C. Kohli	Estimation and costing	S. Chand
3	A. S. Kotadiya	Professional practice and valuation	Mahajan

Supplementary resources:

1.https://lecturenotes.in/notes/14573-note-for-estimating-costing-ec-by-jntu-heroes
2.http://fmcet.in/CIVIL/CE6704_uw.pdf