

GANPAT UNIVERSITY										
FACULTY OF ENGINEERING & TECHNOLOGY										
Programme		Diploma Engineering				Branch		Civil Engineering		
Semester		VI				Version		1.0.0.0		
Effective from Academic Year			2020-21			Effective for the batch Admitted in			July 2018	
Subject code		1CI2604		Subject Name		QUANTITY SURVEY & VALUATION				
Teaching scheme					Examination scheme (Marks)					
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total	
	L	TU	P	TW						
Credit	3	0	1	0	4	Theory	40	60	100	
Hours	3	0	2	0	5	Practical	30	20	50	

Pre-requisites:
The students have to know about basics of Engineering Materials, Building Construction, Building Drawing and Quantity Survey and Costing.

Course Learning Outcomes:
The course content should be taught and implemented with an aim to develop different skills leading to the achievement of the following competencies and course learning outcomes: CO1. Familiar with basic knowledge about rules for preparing approximate and detailed estimate. CO2. Implements of Standard specifications for various Civil engineering items execution. CO3. Important of Rate analysis, Task work, Market rate, and Labour rate to evaluate cost of various items. CO 4. Prepare detailed estimates for civil works like R.C.C. lintel -Chajja, Beam, Slab, Column, RW and Culvert & Evaluate present cost of existing structures and open land property.

Course Content						
Name of UNIT	Unit Content		Unit Learning Outcomes		Marks	Hrs
UNIT – 1 INTRODUCTION & MODES OF MEASUREMENT	1.1	Necessity/ importance of estimate and its types	1a	Importance of preparing an estimate	5	4
	1.2	General rules based on IS : 1200 for measuring of works, Accuracy criteria / Deduction rules for measuring various items	1b	Types of approximate and detailed estimate		
	1.3	Units of measurement for various items	1c	Interpretation of code IS:1200		
	1.4	Importance of various approximate and detailed estimates	1d	Importance of accuracy criteria and Rules for deduction		
	1.5	Understanding various terminology: Provisional sum, Prime cost, Provisional quantity, Spot item, Day work, Contingencies charges, Work charged establishment charges, Water charges				

<p align="center">UNIT – 2 SPECIFICATIONS</p>	<p>2.1 Importance / purposes of Specifications 2.2 Types of specifications 2.3 Principles of specification writing 2.4 Detail specification of various 10 items</p>	<p>2a Importance of specifications in field execution work 2b Preparation of detailed specifications for different items</p>	<p align="center">5</p>	<p align="center">4</p>
<p align="center">UNIT – 3 RATE ANALYSIS</p>	<p>3.1 Importance of R.A. 3.2 Factors affecting R.A. 3.3 Task work and factors affecting Task work 3.4 Rate Analysis of various 10 Civil engineering items 3.5 S.O.R., Market rates, Labour rates</p>	<p>3a Determining R.A. of items which are excluded in SOR 3b List out R.A. for various items 3c Familiarise with Market rates, Labour rates and Task work</p>	<p align="center">8</p>	<p align="center">7</p>
<p align="center">UNIT – 4 DETAILED ESTIMATE</p>	<p>4.1 Estimate for one / two storey load bearing / frame structure building 4.2 Estimate for building components: I. RCC Lintel with Chhajja II. RCC beam III. RCC Slab (One way / Two way) IV. RCC Column with footing V. RCC Retaining wall VI. RCC Slab culvert / Pipe culvert</p>	<p>4a Get idea of measurement and costing of proposed structures 4b Preparation of estimates for various amenities (services) and structural components of construction work</p>	<p align="center">35</p>	<p align="center">24</p>
<p align="center">UNIT – 5 VALUATION</p>	<p>5.1 Define terms : Cost, Price, Value, Real estate , Personal estate 5.2 Objects of valuation 5.3 Mortgage, freehold property, lease-hold property 5.4 Property income, gross income, net income, outgoing 5.5 Depreciation and obsolescence 5.5 Different forms of value Factors affecting value of property Miscellaneous topics: its computation and application I. Annuity and its types II. Sinking fund III. Amortization IV. Year's purchase V. Capitalised value VI. Types of rent Valuation tables and its applications: Table 1 – Fixed deposit formula</p>	<p>5a Differentiate between I. Cost / Price / Value II. Depreciation / obsolescence III. Freehold property / lease-hold property 5b Evaluate present value of the property 5c Describe different forms of value, Rent and C.V. 5d Preparation of valuation report as a case study</p>	<p align="center">07</p>	<p align="center">06</p>

	Table 2 – Find Present value Table 3 – Coefficient of sinking fund Table 4 – Amount accumulated after ‘n’ years Valuation methods for property: I. Rental Method II. Land and Building Method III. Profit and Loss Method IV. Developmental Method Valuation methods for open land: I. Comparative method II. Hypothetical method III. Belting method Valuation report – case study			
			Total	60
				45

List of Practical		
No.	Unit	Name of Practical
1	3	Rate Analysis of various 10 Civil engineering items (In hard and soft copy)
2	4	Estimate for one / two storey load bearing / frame structure building
3	4	Estimate for simple Single storey residential building by L.W./S.W. or C.L. methods
4	4	Estimates RCC Lintel with Chhajja
5	4	Estimate for RCC beam
6	4	Estimate for RCC Slab (One way / Two way)
7	4	Estimate for RCC Column with footing
8	4	Estimates for RCC Retaining wall
9	4	Estimate for RCC Slab culvert / Pipe culvert
10	5	Examples on Depreciation and obsolescence
11	5	Examples on S.F. , Rent, C.V., Y.P., Annuity, Amortisation
12	5	Examples on Valuation Tables: 1, 2, 3, 4
13	5	Examples on present value of existing property and open land property

List of Instruments/Equipment/Trainer Board	
1	Models of different components of buildings and their structural steel / C.C. design.
2	Virtual presentation 2D and 3D drawings using projector

Link of Text Books			
No	Title of Books	Authors	Publication
1	I.S 1200 Part I to XXV (Revised)	--	B.I.S. Publication
2	Estimating & Costing in Civil Engg. (Theory & Practice including Specifications & Valuations)	B.N. Dutta	UBS Publishers' Distributors Ltd
3	Estimating & Costing (Civil Engg.)	S.C.Rangwala	Charutar publishing house pvt.ltd.
4	Estimating & Costing	M.C.Chakraborty	

Link of Reference Books			
No	Title of Books	Authors	Publication
1	A text book of Estimating & Costing	G.S.Birdie	Dhanpat Rai Publishing Co (P) Ltd
2	Estimating & Costing	Vazirani & Chandola	ISBN: 978-81-7409-127-7

Link of Learning Web Resource	
1	https://theconstructor.org/
2	www.nptel.com