

GANPAT UNIVERSITY										
FACULTY OF ENGINEERING & TECHNOLOGY										
Programme		Diploma Engineering				Branch		Civil Engineering		
Semester		V				Version		1.0.0.0		
Effective from Academic Year			2020-21			Effective for the batch Admitted in			July 2018	
Subject code		1CI 2504		Subject Name		QUANTITY SURVEY & COSTING				
Teaching scheme					Examination scheme (Marks)					
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total	
	L	TU	P	TW						
Credit	3	0	2	0	5	Theory	40	60	100	
Hours	3	0	4	0	7	Practical	60	40	100	

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

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 required for preparing an estimate. CO2. Standard specifications for various Civil engineering items. CO3. Types of approximate estimates and its methods. CO 4. Analyse the rates of civil engineering works of Civil engineering items and Prepare detailed estimates for civil works like one/two room Res. Building, S.T./ S.W. / Various roads & Steel roof truss etc.

Course Content						
Name of UNIT	Unit Content		Unit Learning Outcomes		Marks	Hrs
UNIT – 1 INTRODUCTION	1.1	Estimate and its types	1a	Role of an estimator	5	3
	1.2	Data required for preparing an estimate	1b	Importance of preparing an estimate		
	1.3	Purpose of preparing an estimate				
	1.4	Skills required for a good estimator				
	1.5	Duties of a good estimator				
	1.6	Interpretation of drawing and its types				
UNIT – 2 MISCELLANEOUS	2.1	Methods of preparing approximate estimate	2a	Types of approximate and detailed estimate	5	3
	2.2	Methods of preparing detailed estimate	2b	Differentiate various terms related to miscellaneous expense.		
	2.3	Define: Provisional sum, Prime cost, Provisional quantity, Spot item, Day work, Contingencies charges, Work charged establishment charges, Water charges				

<p style="text-align: center;">UNIT – 3 MODES OF MEASUREMENT</p>	<p>3.1 General rules based on IS : 1200 for measurement</p> <p>3.2 Purposes for standardizing measurement and deduction rules</p> <p>3.3 Accuracy criteria and Rules for deduction for different civil works</p> <p>3.4 Units of measurement for various civil engineering items</p> <p>3.5 Task work, Market / labour rate</p> <p>3.6 Multiplying factors for various types of painting works</p>	<p>3a Interpretation of code IS:1200</p> <p>3b Importance of accuracy criteria and Rules for deduction in various items of measurement</p>	5	4
<p style="text-align: center;">UNIT – 4 SPECIFICATIONS</p>	<p>4.1 Specifications and its importance</p> <p>4.2 Purposes of specifications</p> <p>4.3 Types of specifications</p> <p>4.4 Principles of specification writing</p> <p>4.5 Detail specification of various 10 items</p>	<p>4a Importance of specifications in field execution work</p> <p>4b Preparation of detailed specifications for different items</p>	5	4
<p style="text-align: center;">UNIT – 5 RATE ANALYSIS</p>	<p>5.1 Importance of R.A.</p> <p>5.2 Factors affecting R.A.</p> <p>5.3 Task work and factors affecting Task work</p> <p>5.4 Rate Analysis of various 10 Civil engineering items</p> <p>5.5 R.A. of special items: I. Bituminous road surfacing II. Wood work for frames and shutters III. Stone pitching</p> <p>5.6 S.O.R., Market rates, Labour rates</p>	<p>5a Determining R.A. of items to prepare SOR.</p> <p>5b List out R.A. for various items</p> <p>5c Familiarise with Market rates, Labour rates and Task work</p>	10	6
<p style="text-align: center;">UNIT – 6 DETAILED ESTIMATE</p>	<p>6.1 Estimate for one /two room by L.W./S.W. or C.L. methods</p> <p>6.2 Estimate for simple Single storey residential building</p> <p>6.3 Estimate for Septik Tank/UG tank</p> <p>6.4 Estimate for Turn Wall</p> <p>6.5 Estimate for Soak Pit</p> <p>6.6 Estimate for Canal/Road/Dam</p> <p>6.7 Estimates for various types of road like WBM / Bitumen & Concrete</p> <p>6.8 Estimate for Steel Roof Truss</p>	<p>6a Get idea to evaluate measurement and (abstract) costing of proposed structures.</p> <p>6b Prepared estimates for various miscellaneous amenities (services), structures components of construction work items.</p>	30	25
		Total	60	45

List of Practical		
No.	Unit	Name of Practical
1	5	Rate Analysis of various 10 Civil engineering items (In hard and soft copy)
2	6	Estimate for one /two room by L.W./S.W. or C.L. methods
3	6	Estimate for simple Single storey residential building by L.W./S.W. or C.L. methods
4	6	Estimates for Septic Tank/UG tank
5	6	Estimate for Turn Wall
6	6	Estimate for Soak Pit
7	6	Estimate for Canal/Road/Dam
8	6	Estimates for various types of road like WBM / Bitumen & Concrete
9	6	Estimate for Steel Roof Truss

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. Delhi	B.I.S. Publication Delhi
2	Estimating & Costing in Civil Engg.	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
3	Estimating & Costing (Civil)	D.D.Kohli, Ar. R.C.Kohli	S.Chand & Co. New Delhi

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