

22CE703	ESTIMATION, COSTING AND VALUATION			Semester		VII	
PREREQUISITES			Category		PC	Credit	
Construction Materials, Concrete Technology			Hours/Week		L	T	
					P	TH	
			3	0	0	3	
Course Learning Objectives							
1	To study the knowledge in estimation and will be able to prepare estimates						
2	To understand procedure of rate analysis for all building						
3	To study tender practices, specification and prepare report.						
4	To study contract procedures						
5	To understand valuation of building						
Unit I	QUANTITY ESTIMATION			9	0	0	9
Principle of estimation- units- item work- different kinds of estimates- different methods of estimation- estimation of materials in single room building- two room building- multi storey buildings with different sections of walls ,foundation, floors and roofs, R.B and R.C.C works, Plastering, white washing, Distempering and painting, doors and windows, lump sum items- Estimates of joineries for panelled and glazed doors, window, ventilators, handrails etc.							
Unit II	RATE ANALYSIS AND COSTING			9	0	0	9
Purpose- importance and requirements of rate analysis- units of measurement preparation of rate analysis- Procedure of rate analysis for items- Earth work, concrete works, R.C.C works, reinforce brick work ,plastering ,painting ,finishing (white washing ,distempering)							
Unit III	SPECIFICATIONS, REPORTS AND TENDERS			9	0	0	9
Specifications – Detailed and general specifications – Constructions – Sources – Types of specifications – Principles for report preparation – report on estimate of residential building – Culvert – Roads – TTT Act 2000 – Tender notices – types – tender procedures – Drafting model tenders , E-tendering-Digital signature certificates- Encrypting –Decrypting – Reverse auctions.							
Unit IV	CONTRACTS			9	0	0	9
Contract – Types of contracts – Formation of contract – Contract conditions – Contract for labour, material, design, construction – Drafting of contract documents based on IBRD / MORTH Standard bidding documents – Construction contracts – Contract problems – Arbitration and legal requirements.							
Unit V	VALUATION			9	0	0	9
Definitions – Various types of valuations – Valuation methods – Necessity – Capitalised value – Depreciation – Escalation – Valuation of land – Buildings – Calculation of Standard rent – Mortgage – Lease.							
Total= 45 Periods							

Text Books:	
1	Dutta BN, Estimating & costing in Civil Engineering, UBS Publishers & Distributors Pvt. Ltd, 28 th Edition 2020
2	Kohli, D.D and Kohli R.C Text book of Estimating and Costing (Civil), S.Chand & Company Ltd,13 th Edition 2013
3	Rangwala SC Estimating & Costing, Charotar Publishing House, Pvt Ltd 1 st January 2017
Reference Books:	
1	M. Chakraborty, Estimation, Costing, Specification & Valuation in Civil Engineering, Charotar Publishing House Pvt Ltd 1 st January 2006
2	Hand Book of Consolidated Data – 8/2000, Vol.1, TNPWD

3	Standard Data Book for Analysis and Rates IRC, New Delhi 2003
4	Standard Data Book for Analysis and Rates, IRC, New Delhi, 2015

Course Outcomes: Upon completion of this course, the students will be able to:		Bloom's Taxonomy Mapped
CO1	Understand the approximate cost of the projects through preliminary and detailed estimates	Understand
CO2	Analyze the rates of individual items for the preparation of the estimates	Analyse
CO3	Explain schedule of quantities required to be attached with the tender documents	Understand
CO4	Gain knowledge on types of contract.	Remember
CO5	Understand the valuation of assets	Evaluate

COURSE ARTICULATION MATRIX

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	1	1	-	-	-	-	-	-	-	-	2	-
CO2	2	2	2	-	-	-	-	-	-	-	-	-	-	2	-
CO3	2	2	1	2	1	-	-	-	-	-	-	-	-	2	-
CO4	2	2	1	1	1	-	-	-	-	-	-	-	-	2	-
CO5	2	2	3	2	1	2	1	-	-	-	-	-	1	2	-
Avg	2	2	1.8	1.5	1	2	1	-	-	-	-	-	1	2	-
3/2/1 – indicates strength of correlation (3- High, 2- Medium, 1- Low)															