

4529 - ESTIMATION AND COSTING										
Teaching Schedule Per Week			Progressive Assessment		Examination Schedule (Marks)					
Lectures	Practical	Credit			Theory		Practical Ex.		Total	
2	3	5	25	25	3 Hrs	100	—		150	
Pre-requisite		Source	Semester	Theory	Test	Total	TW	PR	Gr Total	*
4522, 4524		ARC		75	25	100	50	50	200	

**RATIONALE:-** The aim of this subject is to train the students to assist the architect in preparing a detail estimate and checking of bills and tenders.

COURSE CONTENTS	Hrs	Mks
<b>1. INTRODUCTION</b> General introduction, Definition of the term estimation and costing, Various types of estimates, Plinth area, Carpet area, Cubic content, Item wise estimate.	20	28
<b>2. METHOD OF ITEM WISE ESTIMATE</b> Different items of works, Units of Measurement for different items of works. Use of measurement sheet and abstract sheet. Schedule of rates. Estimate of Sanitation. Estimate of Electrical Installations.	30	32
<b>3. BILLING</b> Calculating quantities of works executed on site using different methods of measurements, Preparing bills using measurement sheets and abstract sheets.	15	20
<b>4. RATE ANALYSIS</b> Factors affecting rates of items, Preparing rate analysis of different items of civil works, Rate analysis for sanitary and water- supplies works.	15	20
Total	32	100

#### TERM WORK: -

- 1) Preparing estimate of a bungalow using methods of estimation.
- 2) Preparing estimate of a commercial/ residential type of building using methods of estimation.
- 3) Preparing bills of various items by taking measurements on site.
- 4) Rate analysis of different items.

#### METHOD OF TEACHING:

Site visits shall be conducted to make the student aware of the methods of billing and estimation.

#### REFERENCE BOOKS: -

- 1) Estimating and costing in civil Engineering - B. N. Dutta.

