

Internal Assessment Test 3–DEC-2022

(solution and scheme of valuation)

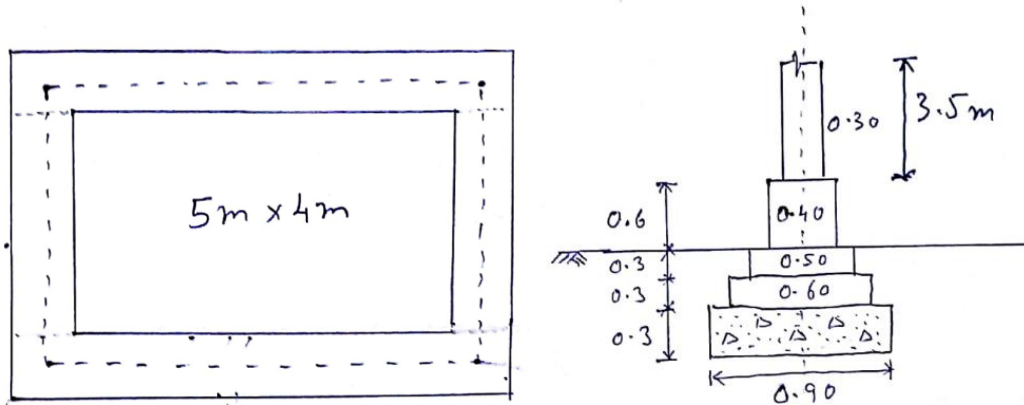
Sub:	Quantity Survey and Contract Management					SubCode:	18CV71	Branch:	Civil	
Date:	26/12/2022	Duration:	90min	MaxMarks:	50	Sem/Sec:	VII–A	Marks	CO	RBT
								[10]		
<p>1 What is an Estimate? What are the objectives of estimation? List and explain the uses of an Estimate.</p> <p>Estimate: An estimate is the anticipated or probable cost of a work and is usually prepared before the construction is taken up.</p> <p>Objectives of estimation: To know the following before the actual construction</p> <ol style="list-style-type: none"> 1. quantity of material required 2. requirement of skilled and unskilled labour 3. duration of project 4. project cost <p>uses of an estimate:</p> <ol style="list-style-type: none"> 1. Estimate is required for inviting Tender. 2. Estimate is required to arrange contract. 3. It controls the expenditure during the execution of project. 4. Estimate of labour, material and cost for Project Management. 5. Valuation of property on ‘land and building basis’ for sale, purchase and mortgage. 6. Fixation of standard rent. 7. Valuation of property for insurance. 8. Used during property disputes. 9. Used to calculate property tax. 10. Used to arrange loan. 11. To estimate demolition cost. 12. During land acquisition to fix compensation cost. 13. To estimate the maintenance and repair cost. 									CO1	L2
<p>2 Explain the Revised Estimate method and Supplementary estimate</p> <p>(6) Revised Estimate</p> <p>Revised Estimate is a detailed estimate and is required to be prepared under any one of the following circumstances</p> <p>(i) When the original sanctioned estimate is exceeded or likely to exceed by more than 5%.</p> <p>(ii) When the expenditure on a work exceeds or likely to exceed the amount of administrative sanction by more than 10%.</p> <p>(iii) When there are material deviation from the original proposal, even though the cost may be met from the sanctioned amount.</p> <p>The revised estimate should be accompanied by a comparative statement showing the variations of each item of works, its quantity, rate and cost under original and revised, side by side, the excess or saving and reason for variation.</p> <p>(7) Supplementary Estimate</p> <p>Supplementary Estimate is a detailed estimate and is prepared when additional works are required to supplement the original works, or when further development is required during the progress of work. This is a fresh detailed estimate of the additional works in addition to the original estimate.</p> <p>The Abstract should show the amount of the original estimate and the total amount including the Supplementary amount for which sanction is required.</p>								[10]	CO1	L2

3. Estimate the quantity of the following items and estimate the cost (any method)

[30]

- i) Earthwork in excavation in foundation @ Rs330 per m³
- ii) Concrete in foundation @ Rs3000 per m³
- iii) SSM (Size Stone Masonry) in foundation and plinth @ Rs2500 per m³
- iv) Brickwork in superstructure @ Rs 3000 per m³

Given the Plan and section on back side of QP



CO1 L3

Solution:

Total c/c length of 30cm wall = $2(0.3/2 + 5 + 0.3/2) + 2(0.3/2 + 4 + 0.3/2) = 19.20\text{m}$

No. of Junctions = 0

Item No.	Particulars of item	No.	L	B	H	Q	Remark
1	Earthwork in excavation in foundation	1	19.20	0.90	0.90	15.55	
2	Concrete in foundation	1	19.20	0.90	0.30	5.18	
3	SSM (Size Stone Masonry) in foundation and plinth						
	Ist footing	1	19.20	0.60	0.30	3.46	
	IInd footing	1	19.20	0.50	0.30	2.88	
	IIIrd footing	1	19.20	0.40	0.60	4.61	
						10.95m ³	
4	Brickwork in superstructure	1	19.20	0.30	3.50	20.16m ³	

Abstract

s.no	particulars	quantity	unit	rate	unit	cost
1	Earthwork in excavation in foundation	15.55	m ³	330	m ³	5131.5
2	Concrete in foundation	5.18	m ³	3000	m ³	15540
3	SSM (Size Stone Masonry) in foundation and plinth	10.95	m ³	2500	m ³	27375
4	Brickwork in superstructure	20.16	m ³	3000	m ³	60480
				total		108526.50
	Add 5%					5426.32
	Total cost					113952.82