

Enrolment No.....



Faculty of Engineering  
End Sem Examination May-2024  
CE3CO32 Quantity Surveying & Estimation

Programme: B.Tech.

Branch/Specialisation: CE

**Duration: 3 Hrs.****Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. The average horizontal distance between the centre of excavation to the centre of deposition is called: **1**  
 (a) Lead (b) Lift (c) Chainage (d) None of these
- ii. Unit of measurement for the work of plastering is: **1**  
 (a) sq. ft. (b) sq. m. (c) cu. ft. (d) cu. m.
- iii. Engineering works created through the processing of parts of the earth's surface involving quantities of soil or unformed rock are called as: **1**  
 (a) Surface work (b) Land work  
 (c) Earth work (d) Hose work
- iv. For initial estimate for a beam design, the width is assumed as: **1**  
 (a)  $1/15^{\text{th}}$  of span (b)  $1/10^{\text{th}}$  of span  
 (c)  $1/20^{\text{th}}$  of span (d)  $1/30^{\text{th}}$  of span
- v. Amount that an asset is estimated to be worth at the end of its useful life: **1**  
 (a) Salvage value (b) Book value  
 (c) Ratable value (d) Obsolescence value
- vi. The process of determining the number of materials, resources, and especially project costs needed to operate during a construction project is called as: **1**  
 (a) Presentation (b) Surveying  
 (c) Estimation (d) Costing
- vii. Which one is not a purpose of tender system: - **1**  
 (a) Competitive rates (b) Value for money  
 (c) Equity in selection of firms (d) Guarantee

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- viii. What is full form of EMD? **1**  
 (a) Essential Matter Description  
 (b) Earnest Money Deposit  
 (c) Early Money Deposit  
 (d) Extra Material Depot
- ix. A specified period after the completion of a construction project during which the contractor is responsible for rectifying any defects or faults that may arise is called: **1**  
 (a) Completion period (b) Project holding period  
 (c) Defect liability period (d) None of these
- x. How are final contracts signed in modern business? **1**  
 (a) e-Signatures (b) Document scanning  
 (c) Thumb impression (d) Shaking hands

- Q.2 i. Write a short note on abstract sheet. **2**  
 ii. Differentiate between approval and sanction. **3**  
 iii. What do you understand by detailed project report? Discuss its characteristics in detail. **5**
- OR iv. Discuss any five types of estimates in detail. **5**

- Q.3 i. Enlist the methods used to calculate the earthwork for any type of road construction. **2**  
 ii. Calculate the quantity of earthwork for a road section having following data- **8**

Chainage (m)	0	30	60	90	120	150	180
G.L. (m)	80.2	80.1	79.9	79.8	79.9	80.0	80.2

Formation width 15.0m. The formation level at 90m chainage is 80.0m and the road has upward slope of 10cm in 30m. Side slope for banking 2:1 (H: V) and for cutting 1:1 (H: V).

- OR iii. Estimate the quantities of brickwork and plastering required in a wall 6 m long, 4 m high and 30 cm thick. **8**  
 Also calculate the cost if the rate of brickwork is Rs. 300/cu. m. and plastering is Rs. 10/sq. m.

- Q.4 i. Differentiate between market value and book value. **3**  
 ii. State and explain various methods of valuation. **7**
- OR iii. What do you mean by depreciation? What are the various methods of determining depreciation? Explain any one briefly. **7**

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- Q.5 i. Enlist the methods for inviting tender. **4**  
 ii. Differentiate between the qualitative and quantitative evaluation of tenders. **6**
- OR iii. Explain in brief about E-tendering. **6**
- Q.6 Attempt any two:  
 i. Discuss types of contracts in detail. **5**  
 ii. What are the various objectives and essentials of a valid contract? **5**  
 iii. Write short note on:  
 (a) Defect liability period  
 (b) Retention money  
 (c) Interim payment  
 (d) Liquidated damage  
 (e) Secured advance **5**

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**Marking Scheme****Quantity Surveying & Estimation (T) - CE3CO32 (T)**

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Q.1	i)	a. Lead		<b>1</b>
	ii)	b. sq. m.		<b>1</b>
	iii)	c. Earth Work		<b>1</b>
	iv)	d. 1/30 <sup>th</sup> of span		<b>1</b>
	v)	a. Salvage Value		<b>1</b>
	vi)	c. Estimation		<b>1</b>
	vii)	d. Guarantee		<b>1</b>
	viii)	b. Earnest money deposit		<b>1</b>
	ix)	c. Defect Liability Period		<b>1</b>
	x)	a. e-Signatures		<b>1</b>
Q.2	i.	correct definition.	2 Mark	<b>2</b>
	ii.	each difference.	1 Mark	<b>3</b>
	iii.	for definition and for characteristics.	1 Mark 4 Mark	<b>5</b>
	OR iv.	for each type.	1 Mark	<b>5</b>
Q.3	i.	for each method.	1 Mark	<b>2</b>
	ii.	for data given.	2 Mark	<b>8</b>
		for correct formula used.	3 Mark	
		for correct answers.	3 Mark	
	OR iii.	for each calculation of brickwork and plaster in respect to Quantity and Costing.	2 Mark	<b>8</b>
Q.4	i.	for each difference.	1 Mark for each	<b>3</b>
	ii.	for each method.	1 Mark for each	<b>7</b>
	OR iii.	for definition.	1 Mark	<b>7</b>
		for methods.	3 Mark	
		for detailed explanation.	3 Mark	
Q.5	i.	for each method.	1 Mark	<b>4</b>
	ii.	for each difference.	1 Mark	<b>6</b>
	OR iii.	for definition and for detailed explanation.	2 Mark 4 Mark	<b>6</b>
Q.6		Attempt any two:		
	i.	for each type.	1 Mark	<b>5</b>
	ii.	each for objective and essentials.	2.5 Mark	<b>5</b>
	iii.	for each note	1 Mark	<b>5</b>