Enrollment No......................................

Faculty of Engineering
End Sem (Odd) Examination May-2022
CE3CO15 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.

Q.1 i. The Excavation exceeding 1.5m in width and 10 m in plan area with a depth not exceeding 30 cm, is termed as-   **1**
(a) Excavation   (b) Surface Dressing
(c) Cutting   (d) Surface Excavation

ii. The measurement is made in square meter in case of-   **1**
(a) Cement Concrete in Foundation
(b) R.C.C structure
(c) Hollow Concrete block wall
(d) None of these

iii. Pick up the correct statement from the following: **1**
(a) Bricks are paid per quintal
(b) Cement is paid per 50 kg bag
(c) Lime is paid per thousand
(d) All of these

iv. For 10 cum. C.C of 1:2:4 the sand required is-   **1**
(a) 4.4 cum   (b) 6.4 cum
(c) 8.4 cum   (d) 10.4 cum

v. The 'centre line method' is specially adopted for estimating-   **1**
(a) Circular building   (b) Octagonal building
(c) Hexagonal building   (d) All of the above

vi. The weight of 6mm diameter bar per meter length is approximately.   **1**
(a) 0.22 kg   (b) 0.44 kg
(c) 3.85 kg   (d) 1.85 kg

vii. The amount left after deducting all outgoings, operational and collection expenses from the gross income. **1**
    (a) Capital cost   (b) Net income
    (c) Outgoings   (d) Gross income

viii. It is the amount shown in account books after allowing necessary depreciations. **1**
    (a) Scrap value   (b) Market value
    (c) Salvage value   (d) Book value

ix. Which of these is not mentioned in a tender? **1**
    (a) Date   (b) Notice number
    (c) Sign of the authority   (d) Designation

x. The judgement given by arbitrator is known as: **1**
    (a) Arbitration   (b) Arbitral award
    (c) Arbitral tribunal   (d) None of these

Q.2 i. Difference between measurement sheet and abstract sheet. **2**
ii. Define face sheet, contingencies, work charge establishment. **3**
iii. What is DPR? Discuss the content of DPR in detail **5**
OR iv. What is S.O.R? Explain in detail. **5**

Q.3 i. Define out turn work. **2**
ii. Define rate analysis? Enlist the factors which affect the rate of analysis. **8**
OR iii. Prepare the analysis of rates for 1:2:4 RCC work in beam. Assume data suitably. **8**

Q.4 Attempt any two:
i. Work out the cost of earth work for a portion of a road from Rd to Rd 90 meters from the following data: **5**

Rd	N.S level	Formation level
0	205.00	210.00
30	205.60	
60	206.00	
90	206.80	

The formation is in downward gradient of 1 in 30. Formation width is 10 meter and side slope 2:1 rate of earth work is Rs. 450 per m^3.

ii. Explain in the methods of details estimate. **5**
iii. Explain in detail methods of road estimate earthwork. **5**

Q.5 i. Define the following terms: **3**
    (a) Sentimental value   (b) Lease hold property, Depreciation.
ii. Define valuation. what is the various purpose of valuation? **7**
OR iii. A government accommodation is built at the cost of Rs. 80000 The water, sanitary and electrical installation expenditure is Rs. 20000. Calculate the standard rent of the building if the following rates are fixed: **7**
    (a) 5% on construction cost
    (b) 2% on maintenance of building work
    (c) 3% on installation expenditure
    (d) Rs. 150 as property tax per year
    (e) Cost of land is to be neglected

Q.6 Attempt any two:
i. Explain Global Tendering and E-Tendering. **5**
ii. What is Arbitration and how does it work? What are various qualities and power of an Arbitrator? **5**
iii. Define tender. Explain different types of tenders. **5**

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Marking Scheme
CE3CO15 Quantity Surveying & Estimation

Q.1 i.   The Excavation exceeding 1.5m in width and 10 m in plan area with a   **1**
          depth not exceeding 30 cm, is termed as-
          (d) Surface Excavation
     ii. The measurement is made in square meter in case of-   **1**
          (d) None of these
     iii. Pick up the correct statement from the following: **1**
          (b) Cement is paid per 50 kg bag
     iv. For 10 cum. C.C of 1:2:4 the sand required is-   **1**
          (a) 4.4 cum
     v.   The 'centre line method' is specially adopted for estimating-   **1**
          (d) All of the above
     vi. The weight of 6mm diameter bar per meter length is approximately.   **1**
          (a) 0.22 kg
     vii. The amount left after deducting all outgoings, operational and collection   **1**
          expenses from the gross income.
          (b) Net income
     viii. It is the amount shown in account books after allowing necessary   **1**
          depreciations.
          (d) Book value
     ix. Which of these is not mentioned in a tender?   **1**
          (c) Sign of the authority
     x.   The judgement given by arbitrator is known as: **1**
          (b) Arbitral award

Q.2 i.   Table format for measurement sheet   1 Mark   **2**
          Table format for abstract sheet.   1 Mark
     ii. Definition   1 Mark each   **3**
                                                      (1 Mark*3)
     iii. Definition   1 Mark   **5**
          For content with explanation   (0.5 Mark*8)
OR   iv. For each point   1 Mark each   **5**
                                                      (1 Mark*5)

Q.3 i.   Definition   2 Marks   **2**

     ii. Definition   2 Marks   **8**
          Each factor   1 Mark each
                                                      (1 Mark*6)
OR   iii. For material   2 Marks   **8**
          For labour   2 Marks
          Contractor profit   2 Marks
          Water Charges   2 Marks

Q.4   Attempt any two:
     i.   Quantity = 4084.80 (for detail sheet)   4 Marks   **5**
          For abstract sheet   1 Mark
     ii. For each method   2.5 Marks each **5**
                                                      (2.5 Marks*2)
     iii. For 3 methods   1 Mark each   **5**
                                                      (1 Mark*3)
          Formulae   2 Marks

Q.5 i.   For each definition   1 Mark each   **3**
                                                      (1 Mark*3)
     ii. Definition   1 Marks   **7**
          For each purpose explain in detail   1 Mark each
                                                      (1 Mark*6)
OR   iii. (a) 1) Rs. 4000   0.5 Mark   **7**
              2) Rs. 1600   0.5 Mark
              3) Rs. 600   0.5 Mark
              4) Gross return Rs. 6350   1 Mark
                 Standard rate Rs. 529.16   0.5 Mark
              b) capital value=Rs.80000 with formula 2 Marks
              Cost of installation and standard rent= Rs. 6000 per year
                                                      2 Marks

Q.6   Attempt any two:
     i.   Global Tendering   2.5 Marks   **5**
          E-Tendering.   2.5 Marks
     ii. Arbitration   1 Mark   **5**
          For how does it work   2 Marks
          For qualities and power   (0.5 Mark*4)

		2 Marks	
iii.	Definition of tender	2 Marks	**5**
	For each type of tenders	(1 Mark*3)	
		3 Marks	

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