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**Question Paper Code: 97102**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2022

Seventh Semester

Civil Engineering

19UCE702 – Estimating & Costing

(Regulation 2019)

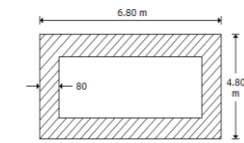
Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (20 x 1 = 20 Marks)

1. The Useful part of livable area of the building is known as CO1- U  
(a) Floor Area                      (b) Circulation Area                      (a) Floor Area                      (b) Circulation Area
2. Due to change in price level, a revised estimate is prepared if the sanctioned CO1- U  
estimate exceeds  
(a) 2%                                      (b) 2.5%                                      (c) 4%                                      (d) 5%
3. The main factor to be considered while preparing a detailed estimate is CO1- U  
(a) Quantity of material                                      (b) Location of site and local labor charge  
(c) Transportation of materials                                      (d) All of these
4. Which of the following is not included in the covered area? CO1- U  
(a) Rooms                                      (b) Roof Slab                                      (c) Walls                                      (d) Compound wall
5. The concrete work for the following part of the building specified thickness is CO1- U  
measured in square meters  
(a) roof slab                                      (b) floors                                      (c) wall panels                                      (d) all the above
6. Referring of given figure, pick up the correct statement from the following: CO1- U



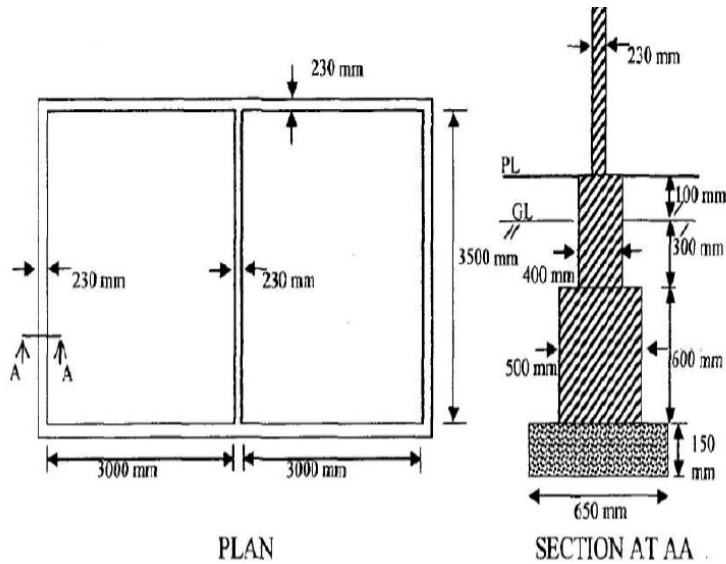
- (a) The total length of centre line is 23.2 m
- (b) Length of long wall out-to-out is 8.80 m
- (c) Length of short walls in-to-in is 5.20 m
- (d) The total length of centre line is 21.2 m

7. Calculate the number of cement bags required for 2500 kg of cement. CO1- U  
 (a) 50 (b)100 (c) 500 (d) 200
8. The unit of payment of cement concrete in lintels is \_\_\_\_\_ CO1- U  
 (a) Per sqm (b) Per cum (c) Quintal (d) Kilograms
9. The rates of materials used for government works are approved by \_\_\_\_\_ CO1- U  
 (a) Executive Board (b) SDO (c) Elective Boardd (d) Board of Chief Engineers
10. Which of the following is not a classification of labour? CO1- U  
 (a) Skilled first class (b) Skilled third class  
 (c) Skilled second class (d) Unskilled fourth class
11. Schedule of Rates are formulated by \_\_\_\_\_ CO1- U  
 (a) PWD (b) CPWD (c) NHAI (d) HD
12. Calculate the number of cement bags required for RCC (1:2:4) for 15 m<sup>3</sup> of work. CO1- U  
 (a) 24.6 (b) 38.9 (c) 56.7 (d) 93.8
13. The plinth area of a building does not include CO1- U  
 (a) Area of the walls at the floor level  
 (b) Internal shaft for sanitary installations up to 2 sq m. in area  
 (c) Lift and wall including landing  
 (d) Area of the cantilevered porch
14. Brick walls are measured in sq. m if the thickness of the wall is CO1- U  
 (a) 10 cm (b) 15 cm (c) 20 cm (d) None of these
15. The main factor to be considered while preparing a detailed estimate, is CO1- U  
 (a) Quantity of the materials (b) Availability of materials  
 (c) Transportation of materials (d) All the above
16. The brickwork is not measured in cum in case of CO1- U  
 (a) One or more than one brick wall (b) Brickwork in arches  
 (c) Reinforced brickwork (d) Half brick wall

17. The diameter of longitudinal bars of a column should never be less than \_\_\_\_\_ CO1- U  
 (a) 6 mm (b) 8 mm (c) 10mm (d) 12 mm
18. For initial estimate for a beam design, the width is assumed \_\_\_\_\_ CO1- U  
 (a) 1/15th of span (b) 1/10th of span (c) 1/20th of span (d) 1/30th of span
19. The rate of an item of work depends on CO1- U  
 (a) Specifications of works (b) Specifications of materials  
 (c) Proportion of mortar (d) All the above
20. Pick up the incorrect statement from the following: CO1- U  
 (a) Dimensions are measured to the nearest 0.01m  
 (b) Areas are measured to the nearest 0.01 m<sup>2</sup>.  
 (c) Cubic contents are measured to the nearest 0.1 m<sup>3</sup>.  
 (d) Weights are measured to the nearest 0.001T.

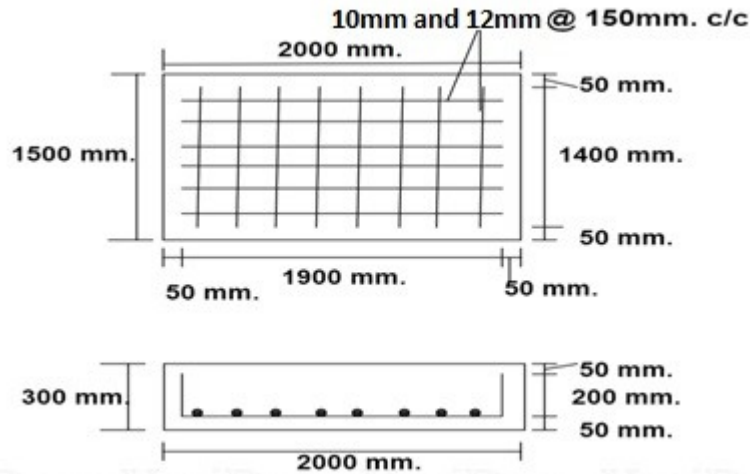
PART – C (4 x 20= 80 Marks)

21. (a) Briefly explain the different types of estimates discussing when each one is preferred. CO1-U (20)  
 Or  
 (b) Explain the methods used to find the approximate cost of the building. CO1-U (20)
22. (a) Formulate schedule of Rates for 2025 by interrupting SOR of 2015 with 45% of hike in prices. CO5-Ana (20)  
 Or  
 (b) Offer a contract to build a new bridge with all the required documentations and estimates for required plan. CO5-Ana (20)
23. (a) The Plan and sectional elevation of the building are given in Fig. Compare the Estimate quantities for the given 2 cases CO4-Ana (20)  
 Case1:  
 (i) Plain Cement Concrete for Foundation PCC (1:4:8)  
 (ii) Concrete for roof slab(thickness of slab = 100 mm (M20)  
 Case 2:  
 (i) Plain Cement Concrete for Foundation PCC (1:3:6)  
 (ii) Concrete for roof slab(thickness of slab = 100 mm (M30)



Or

- (b) Compare the Quantity of steel for BBS of a Footing given with CO4-Ana (20)  
 10mm dia and 12mm dia bars as main reinforcement.



24. (a) Explain the procedure and purpose of Rate Analysis with an ongoing project. CO1-U (20)

Or

- (b) Explain the difference between tender and contract and also write down the procedure to formulate a tender and its proceedings. CO1-U (20)