

CBCS SCHEME

15CV81

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Eighth Semester B.E. Degree Examination, Aug./Sept.2020 Quantity Surveying and Contracts Management

Time: 3 hrs.

Max. Marks: 80

- Note: i) For Regular Students: Answer any FIVE full questions irrespective of modules.
ii) For Arrear Students : Answer any FIVE full questions, choosing ONE full question from each module.*

Module-1

- 1 Prepare a detailed estimate for a residential building shown in Fig.Q1, for the following items of work:
- (i) Earthwork excavation for foundation in hard soil
 - (ii) BBM walls with CM 1:6 for super structures
 - (iii) Cement plaster (1:3), inside and outside walls.

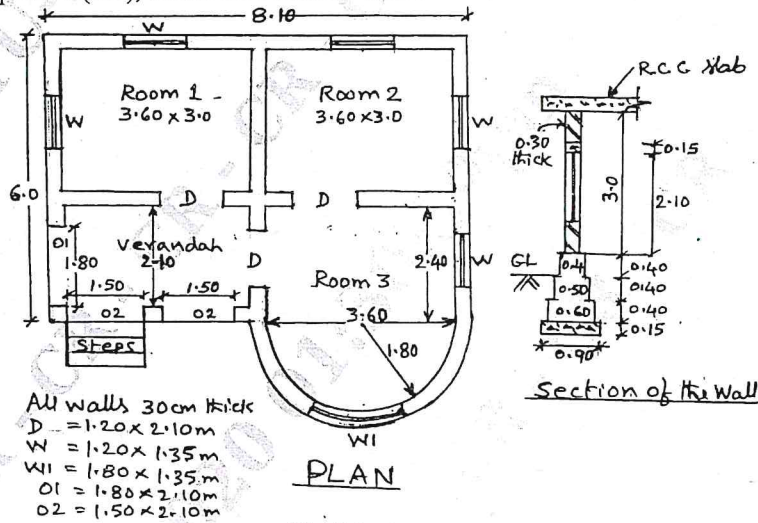


Fig.Q1

(16 Marks)

- 2 Estimate the cost of RCC roof slab in C.C 1:1½ :3 over a room of internal dimension 3.2m x 4.2m. Calculate the quantity of concrete and steel reinforcement. Given : Slab thickness = 150mm, Two-way slab. Steel requirement : Main steel = 10mmφ @ 150 mm c/c Secondary steel : 8mmφ @200mm c/c. Alternate bars cranked at one end only. TMT bars used, hence provide L-bind at ends. Wall thickness = 200 mm, Cost of concrete = Rs. 12,000/m³. Cost of steel bars = Rs. 50/kg.
- (16 Marks)

Module-2

- 3 The details of manhole is given in Fig.Q3. Find its quantities of the following items:
- (i) Earth work excavation for foundation in hard soil.
 - (ii) B.B.M in CM 1:4 for walls
 - (iii) RCC roof vocering slab in C.C. 1:2:4
 - (iv) Plastering in CM 1:3 for inside walls.
 - (v) Bed concrete in CC 1:3:6

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(16 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

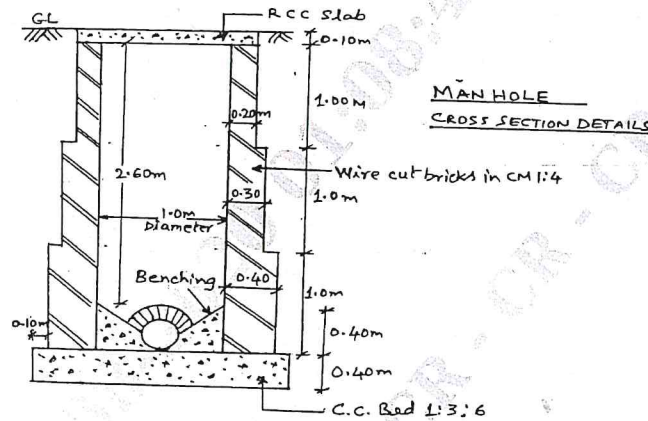


Fig.Q3

- 4 Estimate the quantities of earthwork from chainage 70 to 76 measured with a standard 20 m chain from the following data. Use mean sectional area method. Side slopes 1:1 in cutting and 2:1 in banking. Formation width of road is 12m. Draw the longitudinal section of the proposed road.

Chainage	70	71	72	73	74	75	76
Ground level (m)	88.10	87.74	87.80	88.20	90.75	90.20	89.98
Formation level (m)	88.50	Raising gradient 1 in 100 →					

(16 Marks)

Module-3

- 5 a. Mention the objectives of writing specifications. (04 Marks)
 b. Write the detailed specifications for any two of the following :
 (i) First class brickwork in superstructure in CM 1:6
 (ii) Bed concrete in foundation in C.C.(1:4:8)
 (iii) Distemping two coats with a coat of primor (12 Marks)
- 6 a. Mention the factors affecting rate of item of work. (04 Marks)
 b. Workout from first principles the rate per unit for any two of the following :
 (i) Size stress masonry in CM 1:6 for Plinth
 (ii) 12mm thick plastering for inside walls in CM 1:6
 (iii) R.C.C work for beam in C.C. (1 : 1½ : 3) (12 Marks)

Module-4

- 7 a. Define :
 (i) Running bill (ii) Secured Advance (iii) Advance payment
 (iv) Voucher (v) Quotation (vi) Contractor (06 Marks)
 b. What are the different types of contract? Explain any two. (05 Marks)
 c. Explain briefly the reasons in which he contract can be terminated. (05 Marks)
- 8 a. What are the advantages and disadvantages of Lump-Sum contract? (06 Marks)
 b. Explain Tender Notice. List the essential information given along with tender notice. (05 Marks)
 c. Write the elements of standard tender document. (05 Marks)

Module-5

- 9 a. What is measurement book? What are the rules to be followed in recording measurement book? (08 Marks)
- b. A building is situated by the side of a main road. The built up portion is $20\text{m} \times 15\text{m}$. The building is of first class type and provided with water supply, sanitation and electric fitting. Age of the building is 30 years. Workout the valuation of the property. Area of land on which building stands is 500m^2 . Assume plinth area rate as Rs $20,000/\text{m}^2$, life of the building 100 years and cost of land, Rs. $2500/\text{m}^2$. (08 Marks)
- 10 a. Define (i) Obsolescence (ii) Sinking fund (iii) Depreciation (iv) Mortgage (v) Scrap value (vi) Leasehold property. (06 Marks)
- b. A person has purchased a plot of land costing Rs. 8,00,000/- and has constructed a building there on at a total cost of Rs. 20 lakh including water supply, sanitary and electrical installation etc. Allowing a net return @ 7% on the cost of construction and @ 5% net return on the cost of land, workout the standard rent of the property with the following data:
- (i) Sinking fund on 4% basis for the future life of 75 years = 0.0022
(ii) Annual maintenance 0.5% of the cost of construction
(iii) Municipal taxes and other outgoings @ 28% of the gross rent. (10 Marks)

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