

Time: 4 hours

[Total Marks-80]

- N.B. : (1) Question No.1 is compulsory  
 (2) Attempt any THREE questions from the remaining 5 Questions  
 (3) Figures to the right indicate full marks  
 (4) Assume suitable data if necessary

- Q1 Figure No 1 shows the plan and sectional details of a Framed Structure. Work out the quantities of the following items of work from Figure No -1
- Total volume of Concrete in all footings and Plinth Beam
  - Internal and External Plastering Quantity in CM 1:4
  - Volume of 1<sup>st</sup> Class Brick Work in Super Structure.
  - Flooring and Skirting Quantity

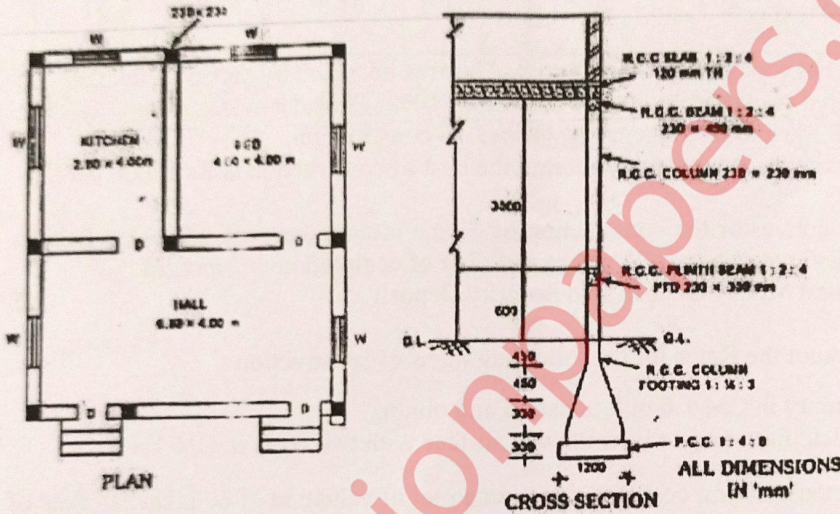


Figure 1

- Q2 (a) Prepare an Abstract of cost for all items in Question Number 1 8
- (b) Prepare a schedule of the following bars for the Beam as per section shown in figure 2. 12
- 2 nos 12 mm dia Anchor bars
  - 2 nos 20 mm dia Bent up bars and 2 nos Bottom bars
  - 6 nos 10 mm dia Stirrups

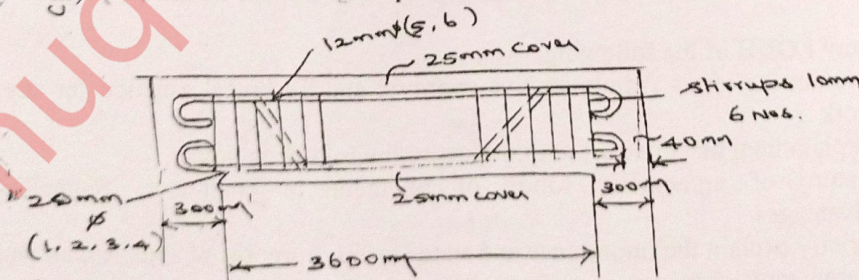


Figure 2

BE Civil Sem - VII 'C' scheme

28/11/23

- Q3 (a) Define Specification. State the different purposes served by specification. Write brief specification of First class brick work in Superstructure with CM 1:4. **8**
- (b) Estimate the quantity of earthwork for a portion of a road to be constructed by **Mean Depth Method** from the following data. **12**

Formation width = 12 m.

Side slope in banking = 2:1, and in cutting 1.5:1.

Downward gradient 1 in 200

RL of Formation level at zero chainage is 51.4 m.

Chainage and corresponding ground levels are given below.

Chainage	1	30	60	90	120	150	180
RL of GL	50.8	50.6	50.7	51.2	51.4	51.3	51

- Q4 (a) A (G+2) building has a carpet area of 800 sqm. The area occupied by corridor, staircase etc is 25% and the area occupied by walls, column is 10%. Consider water supply @7.5%, Electrification @8.5% and contingency @4% cost of construction. Prepare an Approximate Estimate considering the cost of construction is Rs 10000 per m<sup>2</sup>. **10**
- (b) i) Draft a tender notice for the construction of 4 lane bituminous road of 25 km long in Palghar Region. Estimated cost is 25 crores and time of completion is 7 months. **5**  
ii) Explain Earnest Money Deposit and Security Deposit. **5**

- Q5 (a) Analysis and workout the Rates for the following items of construction **12**
- UCR Masonry in CM 1:6 in foundation and plinth.
  - 12 mm thick plastering to internal wall surface with two coats in CM 1:4

- (b) A newly constructed building cost Rs 1 crore on a plot of valuation of 80 lakhs. 10 flats of 100 m<sup>2</sup> each are constructed. Determine the monthly rent per flat from the following data. **8**

- Net return on land and Building @ 7%
- Life of building is 50 years
- Interest rate on Sinking Fund is 6%
- Salvage value @ 10% of building cost
- Repairs and Maintenance @ 3% of building cost
- Municipal taxes and other outgoings 20% of Gross rent.

- Q6 Attempt any **FOUR** of the following: **20**

- Explain the terms Administrative approval and Technical sanction for any PWD work
- Explain item rate contract with respect to the following points  
Nature of agreement, Mode of payment to contractor, Suitability and Disadvantages
- Briefly explain the importance and state various purposes of approximate estimate
- Easement Rights
- Freehold Property and Leasehold Property
- Valid, Void and Voidable Contracts

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