CBCS SCHEME

USN | | | | | | | | | | |

15CV81

Eighth Semester B.E. Degree Examination, Dec.2023/Jan.2024
Quantity Surveying and Contracts Management

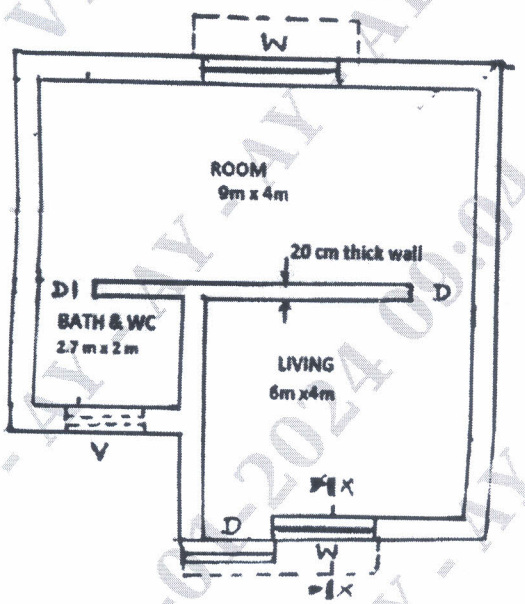
Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

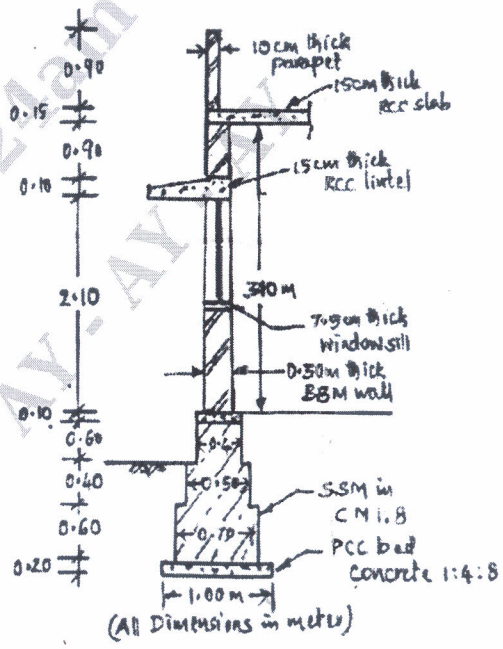
Module-1

1 The detail of a single roomed building with a living area is as shown in Fig.Q.1. The wall between living and room alone are 20cm thick and all other walls are 30cm thick. Estimate the quantities and cost of the following items of work.

i) Earthwork in excavation in ordinary soil for foundation at Rs.325/- per cum.
ii) PCC bed concrete 1:4:8 for wall foundation using 40mm down size aggregate at Rs.2800/- per cum.
iii) SSM in CM1:8 for footings and basement foundation at Rs.1700/- per cum.
iv) First class brickwork in CM 1:6 for super-structure including parapet at Rs.2000/- per cum.
v) RCC 1:1.5:3 for roof slab at Rs.3000/- per cum. **(16 Marks)**



PLAN



SECTION X-X

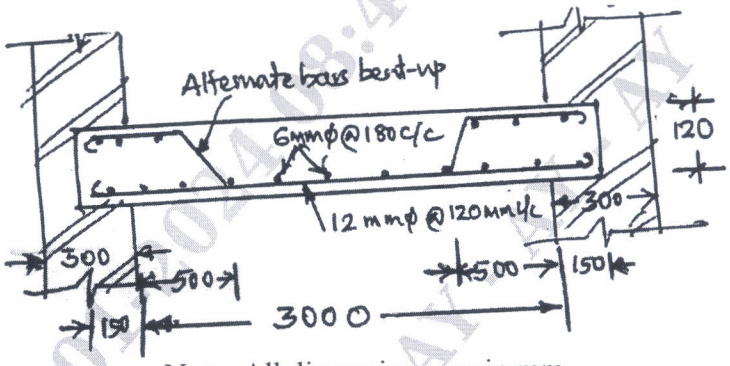
SCHEDULE OF OPENINGS	
D	1.2mx2.10m
D1	1.0mx2.10m
W	1.0mx1.2m
V	1.0mx0.6m

Fig.Q.1

OR

2 a. What are different types of estimates? Explain them in brief. **(06 Marks)**

b. Estimate the RCC roof slab $\left(1:1\frac{1}{2}:3\right)$ shown in Fig.Q.2(b) in detail, including steel reinforcement for a room of size 6m × 3m. Assume clear cover to the reinforcement as 20mm. **(10 Marks)**



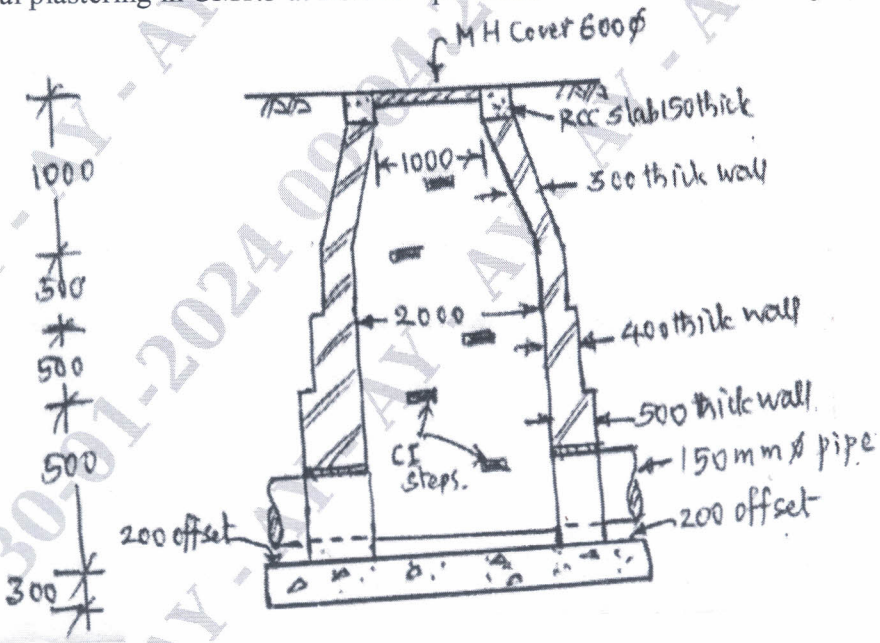
Note: All dimensions are in mm

Fig.Q.2(b)

Module-2

3 The details of a circular man hole is as shown in Fig.Q.3. Estimate the quantities of the following items of work and cost of abstract.

i) Earthwork in excavation for foundation in hard soil at Rs.400/- per cum.
ii) PCC 1:4:8 bed concrete at Rs.2500/- per cum.
iii) BBM in CM1:4 for side walls at Rs.2000/- per cum.
iv) Internal plastering in CM1:3 at Rs.800/- per cum.



All dimensions in mm

Fig.Q.3

(16 Marks)

OR

4 Estimate the quantity of earth work for a portion of road from the following data using 'mean-depth' method. Formation width of the road is 10m, side slopes are 2:1 in filling, 1.5:1 in cutting.

Distance (m)	600	630	660	690	720	750	780	810	840	870	900
RL of GL	51.0	50.9	50.5	50.8	50.6	50.7	51.2	51.4	51.3	51.0	50.6
RL of Formation level	52.0	← Downward Gradient of 1 in 200 →									

(16 Marks)

Module-3

5 Write a detailed technical specification for the following:
- i) Burnt brick masonry in CM1:6.
- ii) Damp proof course, 20mm thick in CM1:3.
- iii) Plastering interior walls with lime rendering in CM1:4.
- iv) RCC 1:1½:3 for roof slab. **(16 Marks)**

OR

6 Carry out detailed RATE ANALYSIS for the following:
- i) PCC 1:4:8 for foundation using 40mm down size aggregate.
- ii) Random rubble masonry in CM1:6.
- iii) First class BBM in CM1:6.
- iv) Outside plastering-12mm thick for brick wall in CM1:4. **(16 Marks)**

Module-4

7 a. What is Tendering? Explain its classification and necessity. **(08 Marks)**

b. What is meant by 'Contract Document'? Enumerate its various components. **(08 Marks)**

OR

8 a. Explain the different types of contracts as applied to Civil Engineering construction. **(07 Marks)**

b. Write explanatory notes on:
- i) Subcontracting
- ii) Turnkey operation and its advantages
- iii) BOOT method if contracting. **(09 Marks)**

Module-5

9 Enumerate with explanatory notes on the following:
- i) Earnest money and security deposit
- ii) Liquidated damages and bonus
- iii) Arbitration
- iv) Performance security. **(16 Marks)**

OR

10 a. What is meant by VALUATION? Explain the methods of valuation. **(08 Marks)**

b. Distinguish the following:
- i) Scrap value and salvage value
- ii) Obsolescence and sinking fund. **(08 Marks)**

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