

B.E. / Civil / Sem - VII / 'C' Scheme / Subj - QSEV / Date: - 14/11/2025

5.11.2025

Q.P. Code: - 10095224
(80 Marks)

Time: 4 Hours

Note:-

- 1) Question No.1 is Compulsory. Attempt any 3 questions from remaining questions.
- 2) Assume Suitable data, if required.

Q.1 Workout following quantities from given plan and section. (Fig.01) 20

- a) Excavation for all footings.
- b) Brickwork in superstructure with cement mortar 1:6.
- c) RCC work for all columns.
- d) Internal Plastering in cement mortar 1:4

Q.2 A) Explain the meaning of specification. Draft general specifications for cement concrete (1:2:4) in foundation 10

B) Explain in brief rate analysis? Prepare rate analysis for 1st class brickwork of thickness 20 cm (1 brick) in cement mortar 1:6 10

Q.3 A) Prepare approximate estimate of (G+3) RCC framed building with 4 flats per floor each of 80m² carpet area. Assume foundation cost 20% of cost of superstructure. Assume allowance for services such as water supply sanitation electrical installation as 20% of building cost. Allowance for consultant's fee = 5% of overall cost. Allowance for contingencies and work charged establishment = 5% and 3%. 10

B) Explain pre-qualification of contractor. 04

C) Draft Notice inviting tender for construction of Hospital Building in Mumbai region for estimated cost of Rs. 700 lacs time limit for work is two years. Contract will be having item rate type and tender fee Rs. 2000/- along with document 06

Q.4 A) A person has purchased a plot of land costing Rs. 8,00,00,000/- and constructed building thereon at a total cost of Rs. 12,00,00,000 including water supply, sanitary and electrical installations etc. Allowing a net return 7% on the cost of construction and 6% net return on the cost of land. Workout standard rent of the property with the following data:

- i) Sinking fund on 4 % basis for the future life of 75 years = 0.22%
- ii) Annual maintenance ½ % of the cost of construction.
- iii) Municipal taxes and other outgoings 28.5% of the gross rent 10

B) What are different types of contracts. Explain any two in detail. 10

Q.5 A) Calculate volume of earthwork in cutting and in banking for the road section whose details are given below. Use mean area method. Given: Width of formation 10m. F.L. at zero chainage = 161.60m, rising gradient is 1:110. side slopes =1.5:1 in banking and 2:1 in cutting. 10

Chainage	0	30	60	90	120	150	180	210
RL of ground (m)	161.50	160.95	160.55	161.55	161.85	162.95	162.35	162.80

B) Clear dimension of one-way slab is 3m x 6.25m. The slab is supported on 230 mm thick wall all around. Main bars are 8mm diameter @ 150 mm c/c (alternate bars are bent up) and distribution bars are 8 mm diameter @ 200 mm c/c. Thickness of slab is 125 mm. Calculate the quantity of reinforcement per cum of concrete in slab. Prepare BBS. Grade of concrete M20 and grade of steel Fe 415. 10

Q.6 Write short notes on (any Four). 20

- i) Balanced and unbalanced tender, ii) EMD and SD, iii) Mass Haul Diagram
- iv) Rules for deduction in brickwork.
- v) Technical Sanction vi) Easement rights.

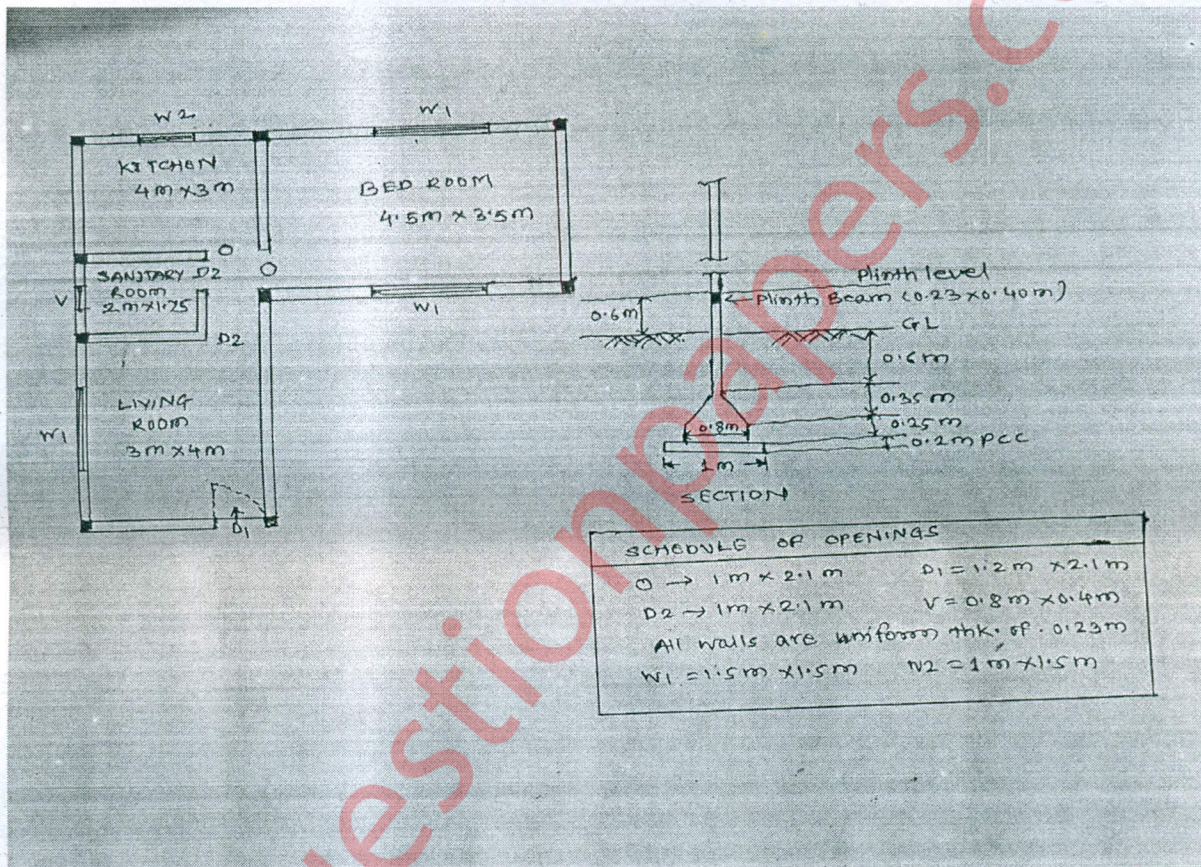


Fig.01