

OR

- 2 Estimate the cost of RCC roof slab in CC 1 : 1 $\frac{1}{2}$: 3 over a room of internal dimension 3.2 × 4.2 m. Calculate the quantity of concrete and steel reinforcement. Given Slab thickness = 150 mm, Two way slab, steel requirement main steel = 10 mmφ @ 150 mm C/C secondary steel : 8 mmφ @ 200 mm C/C. Alternate bars cranked at one end only TMT bars used hence provide L-bind at ends. Wall thickness = 200 mm cost of Rs.12000/m³. Cost of steel bars. (20 Marks)

Module-2

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

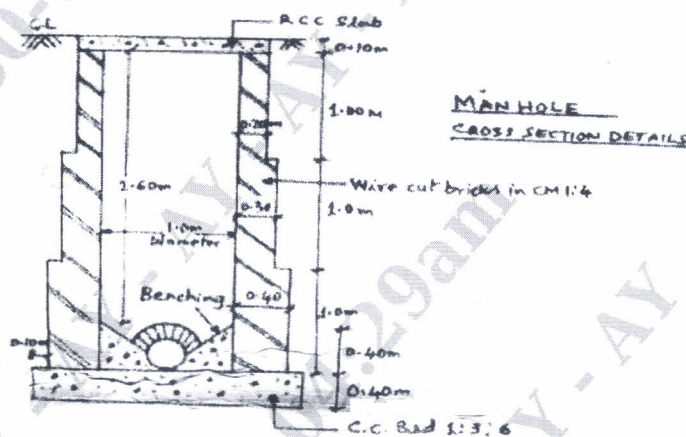


Fig. Q3

OR

- 4 Prepare a detailed estimate for the earthwork for portion of a road from the following data :

Chainage in meters	0	100	200	300	400	500
RL of ground	114.50	114.75	115.25	115.20	116.10	116.85
RL of formation in m	← 115 upward gradient upto 600 as 1 in 200					

Chainage in meters	600	700	800	900	1000	1100	1200
RL of ground	118.00	118.25	118.10	117.80	117.75	117.90	119.50
RL of formation in m	← Downward gradient 1 in 400						

Formation of width of road is 10 m side slope 2 : 1 in banking and 1½ : 1 in cutting. The cost of filling is Rs.220/m³ and cutting is Rs.150/m³. (20 Marks)

Module-3

- 5 Write the detailed specification of the following :
- Reinforced cement concrete (R.C.C).
 - C.C bed 1 : 3 : 6
 - First class brick work in CM 1 : 4.
 - 12 mm thick cement plastering of walls.
- (20 Marks)

OR

- 6 Carry out rate analysis for any three of the following :
- Cement concrete 1 : 2 : 4 in foundation.
 - Coarsed rubble stone masonry in superstructure in 1 : 6 cement mortar.
 - 12 mm thick plastering in CM 1 : 6
 - 2.5 cm thick cement concrete 1 : 1½ : 3 Damp Proof Coarse (D.P.C).
- (20 Marks)

Module-4

- 7 a. What is work charged establishment? (06 Marks)
- b. Define (i) Administration approval (or) Sanction (ii) Technical sanction (06 Marks)
- c. What are the different types of contract? Explain any two. (08 Marks)

OR

- 8 a. What is estimate? What are the different types of estimate? Explain any three. (15 Marks)
- b. Explain tender notice? List the essential information given along with tender notice. (05 Marks)

Module-5

- 9 a. What is measurement book? What are the rules to be followed in recording measurement book? (08 Marks)
- b. Define : (i) Liquidated Damages (ii) Unliquidated damages (06 Marks)
- c. Define : (i) Nominal master roll (ii) Indent (06 Marks)

OR

- 10 a. What is valuation? What are the various purpose of valuation? (05 Marks)
- b. Explain sinking fund method of valuation. (05 Marks)
- c. 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:
- Sinking fund on 4% basis for the future life of 75 years = 0.0022
 - Annual maintainance 0.5 % of the cost of construction.
 - Municipal taxes and other outgoings @ 28% of the gross rent.
- (10 Marks)
