

Course Code: CE409**Course Name: QUANTITY SURVEYING AND VALUATION**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any two full questions, each carries 10 marks.*

Marks

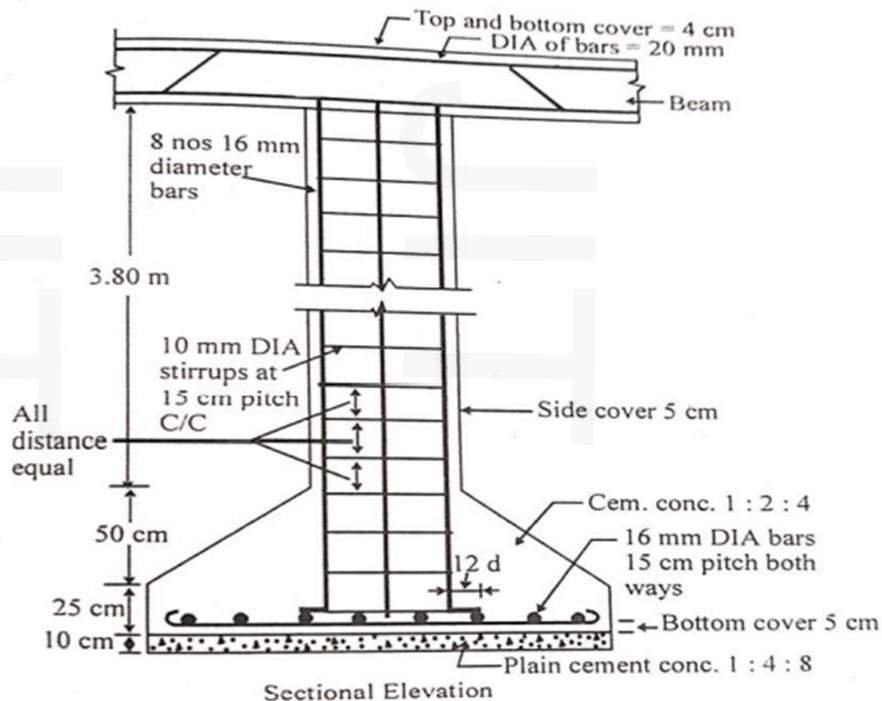
- 1 a) List out factors affecting rate analysis (4)
 b) Elaborate the detailed specification for first class brickwork (6)
- 2 a) Workout the unit rate for cement concrete 1:2:4 using (6)
- | | |
|--------------------------|-------------------------------|
| Materials | cum |
| Stone ballast 40mm gauge | 0.88 @ Rs 1000/m ³ |
| sand coarse | 0.44 @ Rs 1600/m ³ |
| Cement | 0.22 @ Rs 8000/T |
| Labour | Nos |
| Mistri | 0.03 @ Rs 1000 |
| Mason | 0.2 @ Rs 800 |
| Mazdoor | 1.2 @ Rs 500 |
| Women | 2 @ Rs 400 |
| Bhisti | 0.6 @ Rs 300 |
- b) Outline the various method of estimate (4)
- 3 a) Write short note on bill of quantities (2)
 b) Calculate the amount required for carriage of 1500 Nos brick to be brought from a source of 12km away from site. The vehicle access to the construction site is 60m away. CPWD data are as follows for mechanical transport of 1000 Nos of bricks at 1km @ Rs 209.80; 2km @ Rs 237.86; 5km @ Rs 318.22; beyond 5km upto 10 km per km @ Rs 23.15; beyond 10km upto 20km per km @ Rs 19.0; and for transport of 1000 Nos of brick by manual labour Rs 216.40/- for first 50 meters and Rs 47.12/- for every additional 50meter or part thereof.

PART B
Answer any two full questions, each carries 25 marks.

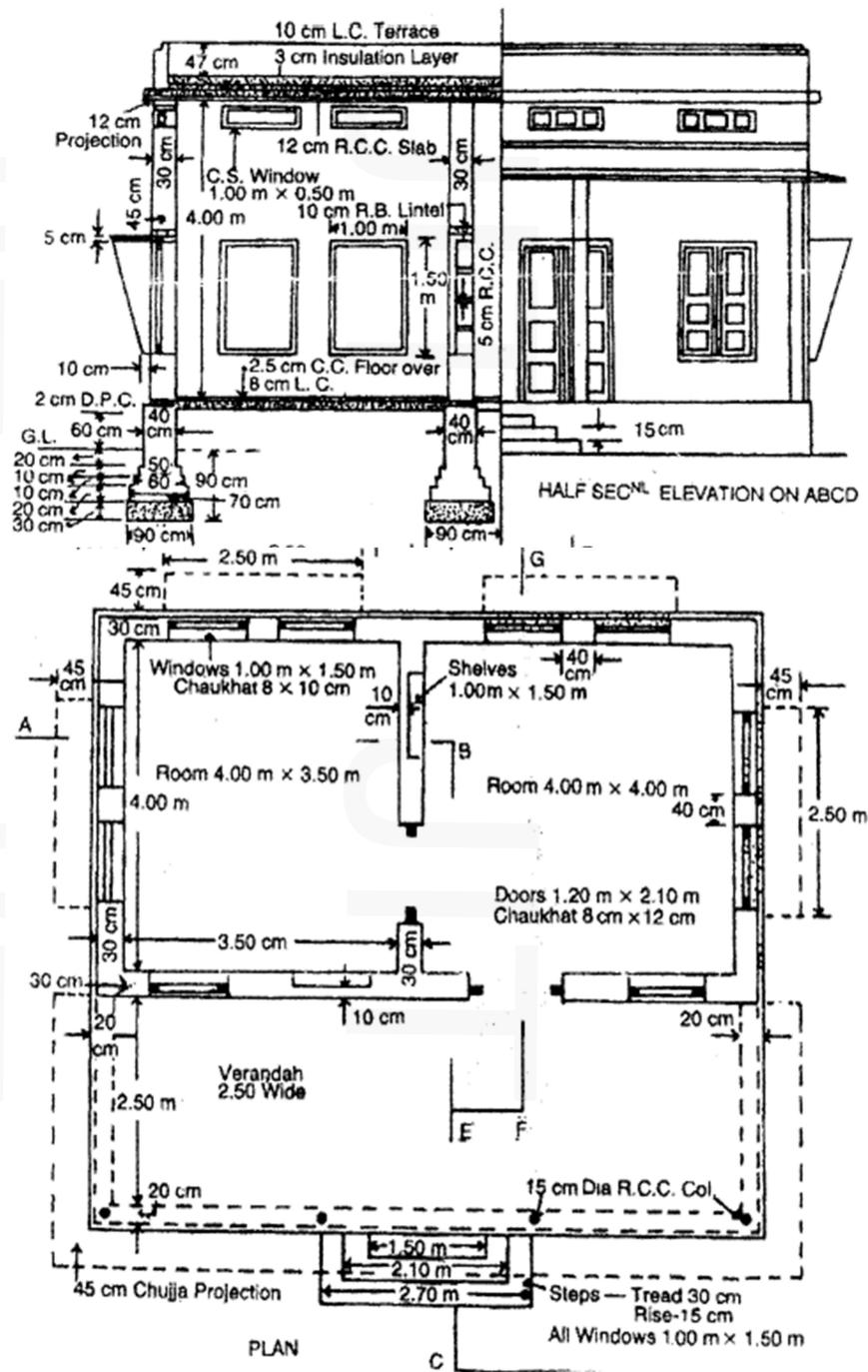
- 4 a) Estimate the quantity of earthwork for road between two stations A to B for the (15) following data. Width of road is 10m at formation surface and side slope is 1:1 in cutting and 2:1 in banking. The data of field book for the portion of road are given below

Distance	0	30	60	90	120	150	180
R L at ground level	73.12	72.44	71.86	72.08	71.30	70.80	70.54
R L at formation level	72.42	Downward gradient 0.8%			Upward gradient 0.5%		

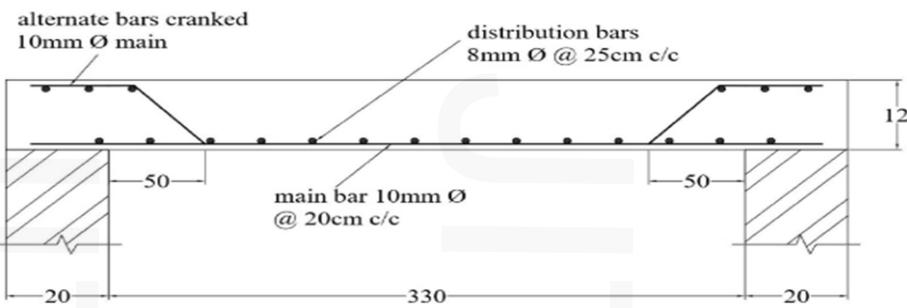
- b) Find out the length of 16mm diameter and 10mm stirrups required for the given (10) drawings with column size 40cm x 40cm, base footing 2.1m x 2.1m



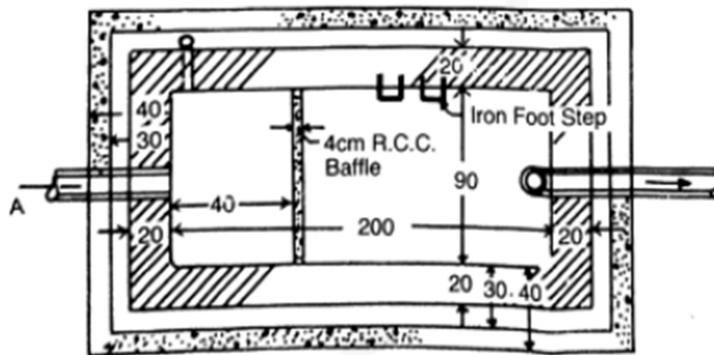
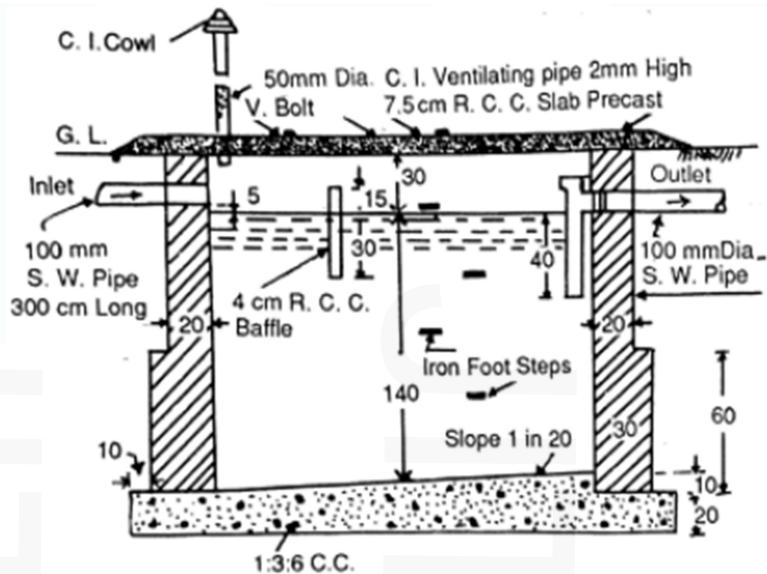
- 5 a) Estimate the quantities required for the construction of two roomed building (10)
- Internal plastering in cement mortar
 - Wood work for door and windows



- b) Find out the total quantity of steel reinforcement required for the slab of size 330cm x 550cm (internal dimensions) shown in the figure. (All dimensions are in Centimetres) (15)



6 Prepare a detailed estimate of a septic tank from the given drawings (25)



PART C

Answer any two full questions, each carries 15 marks.

- 7 a) A building costing Rs 8,00,000/- has been constructed on a freehold land measuring 200 sqm recently in a big city. Prevailing rate of land in the neighbourhood is Rs 250 per

sqm. Determine the net rent of the property, if the expenditure on an outgoing including sinking fund is Rs 34000/- per annum. Work out the gross rent of the property per month.

- b) Write short note on (5)

- i. Annuity ii Sinking Fund iii Years Purchase
- iv Capitalize Value v Outgoings

- 8 a) A real estate agent purchases a vacant land of extent 10 hectares at a cost of Rs 300 per m^2 . He divides the land into building plots of $900m^2$ area after leaving 25% of the land for roads; parks etc. expense for the development is at Rs 1500 per m^2 and technical charges at 8 % of cost price. Work out the selling price of each plot if the agent expects 20% profit of his investment (10)
- b) Outline any five purpose of valuation (5)
- 9 a) An old shop in the main market has been purchased by a person at a cost of Rs 20,000/-. Find out the amount of annual sinking fund at 3% interest assuming future life of the building as 15 years and scrap value of the building as 10% of the cost of purchase. (5)
- b) A property consist of south facing plot of land, having South- East and North sides in due directions, which measures 60m, 180m, 100m respectively. It consists of an old two storey building, having a total cubical content of 3000 cubic meters. Assuming prime cost of construction of the building as Rs 500/- per cubic meter and allowing 10% old material value only for the building, what would you recommend as the fair value of the property, if the front belt land (depth of FB being 25m) be estimated @ Rs 100/- per Sqm? (10)
