

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2023**

QUANTITY SURVEYING II

[Maximum marks: 100]

[Time: 3 Hours]

- [Note:- 1. Missing data if any may be assumed.
2. Sketches are accompanied.
3. Quantities to be marked out in standard form.]

PART – A

Maximum marks: 10

I (Answer *all* the questions in one or two sentences. Each question carries **2** marks)

1. Calculate the length of Common Rafter in terms of eave-to-eave span, when rise is 1/4 of Span.
2. Distinguish between bridge and culvert.
3. State Bar Bending Schedule.
4. Define annuity.
5. Define salvage value. (5 x 2 = 10)

PART – B

Maximum marks: 30

II (Answer any *five* of the following questions. Each question carries **6** marks)

1. A shed of inside dimension 9 x 5 m is provided with hip roof. Wall thickness is 20 cm, eaves projection 60 cm, rise 1/3 span. Calculate the quantity of ridge piece, size of ridge is 120 x 150 mm.
2. Work out the quantity of cement concrete 1:4:8 in foundation for the building shown in figure 1.
3. Calculate the quantity of earth work excavation in foundation for the RCC slab culvert shown in figure 2.
4. Prepare quantity estimate for RCC work 1:2:4 excluding steel and its bending for the column and footing given in figure 4.
5. Write the detailed specification for earth work excavation in foundation.
6. List out the methods of calculation of depreciation and explain any two methods.
7. Describe Sinking Fund and Years Purchase. (5 x 6= 30)

PART – C

Maximum marks: 60

(Answer *one full* question from each unit. Each full question carries **15** marks)

UNIT –I

III. Perform quantity estimate of the following items of work for the Septic Tank and Soak Pit shown in figure3.

- (a) Earth work excavation in foundation for septic tank and soak pit.
- (b) Cement concrete 1:3:6 in foundation and sloping floor.
- (c) First class brick work in 1:4 Cement Mortar for septic tank.
- (d) Second class dry brick work for soak pit. (15)

OR

- IV.** (a) From the attached plan and the detail of wall section (Figure 1), estimate the quantity of RCC slab and lintel. (8)
- (b) A shed of inside dimension 10 x 6 m is provided with Gabled roof. Wall thickness 30 cm, eaves projection 60 cm, rise 1/3 of span. Calculate the Quantity of Common Rafter assuming spacing between common rafter is 50 cm and size of common rafter 50 mm x 125 mm. (7)

UNIT-II

V. Perform quantity estimate of the following items of work for the RCC slab culvert given in figure 2.

- (a) Cement concrete in foundation.
- (b) First class brick work in 1:4 Cement Mortar.
- (c) RCC work 1:2:4 in slab excluding steel and its bending. (15)

OR

VI. Perform quantity estimate of the following items of work for the Bridge Pier given in figure 5.

- (a) Earth work Excavation.
- (b) Cement Concrete in foundation.
- (c) Plastering to masonry work. (15)

UNIT-III

VII. Figure 4 shows plan and c/s of the footing slab with a square RCC Column, 20 cm outside dimension. Cover for footing slab is 50mm, for column is 25 mm and for top slab is 20 mm. Weight of 12 mm dia bars and 8 mm dia bars are 0.89 kg and 0.39 kg per m respectively. Prepare Bar Bending Schedule. (15)

OR

- VIII. (a) Write detailed specification for Plain Cement Concrete. (9)
(b) Write detailed specification for Damp proof Course in Cement Concrete 1:2:4. (6)

UNIT-IV

- IX. (a) Define Valuation and discuss the purposes of valuation. (9)
(b) Write short notes on
(i) Scrap Value (ii) Book Value (iii) Market Value (6)

OR

- X. (a) A building is situated by the side of a main road of a city on a land of 500 m². The built up portion in 20 m x 15 m. The building is first class type and provided with water supply, sanitary and electric fittings and the age of the building is 30 years. Work out the valuation of property. Assuming the plinth area rate as Rs. 200 per m², rd = 1, assume cost of land as Rs. 60 per m². (9)
(b) The total cost of a new building is Rs. 20 lakhs. Work out the depreciated cost of the building after 20 years by straight line method if the salvage value is Rs. 200000 assuming the life of the building is 50 years. (6)

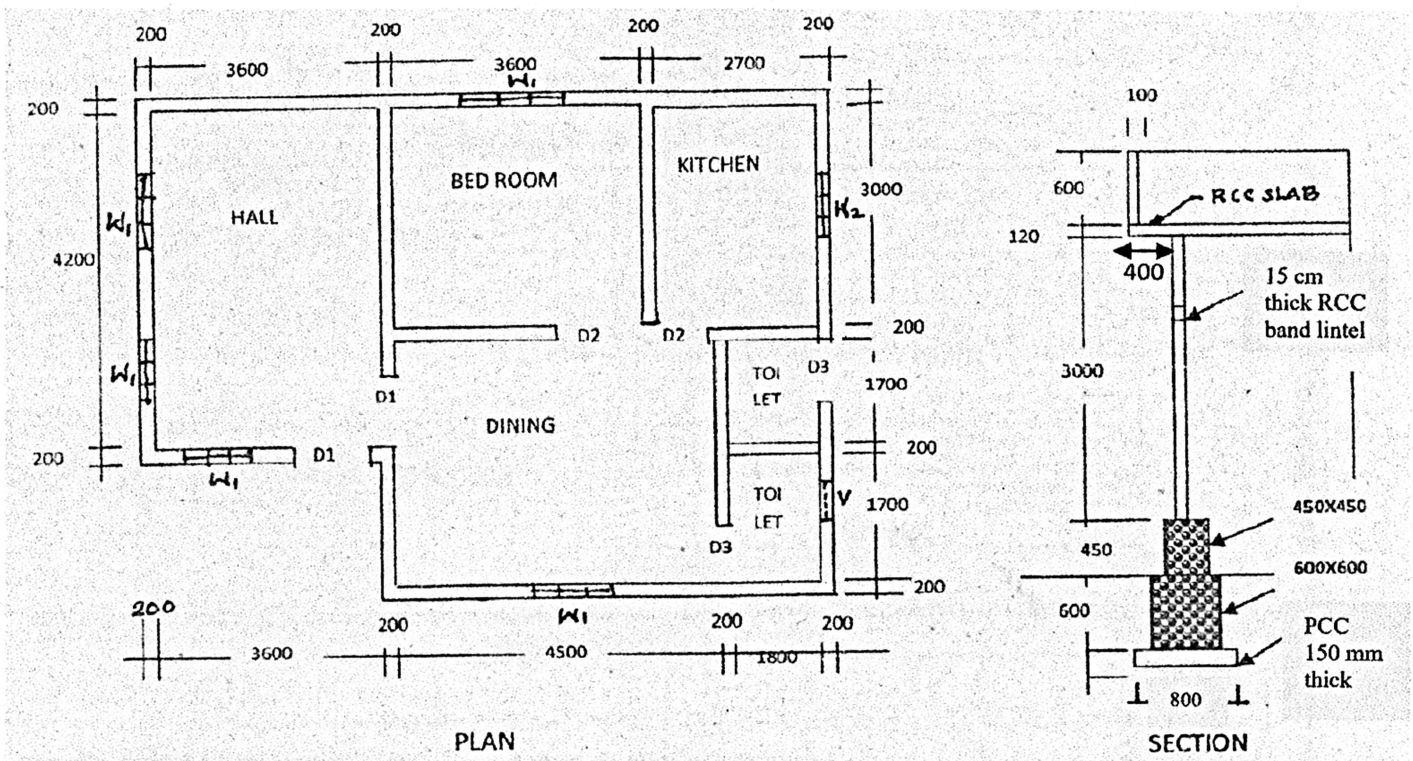
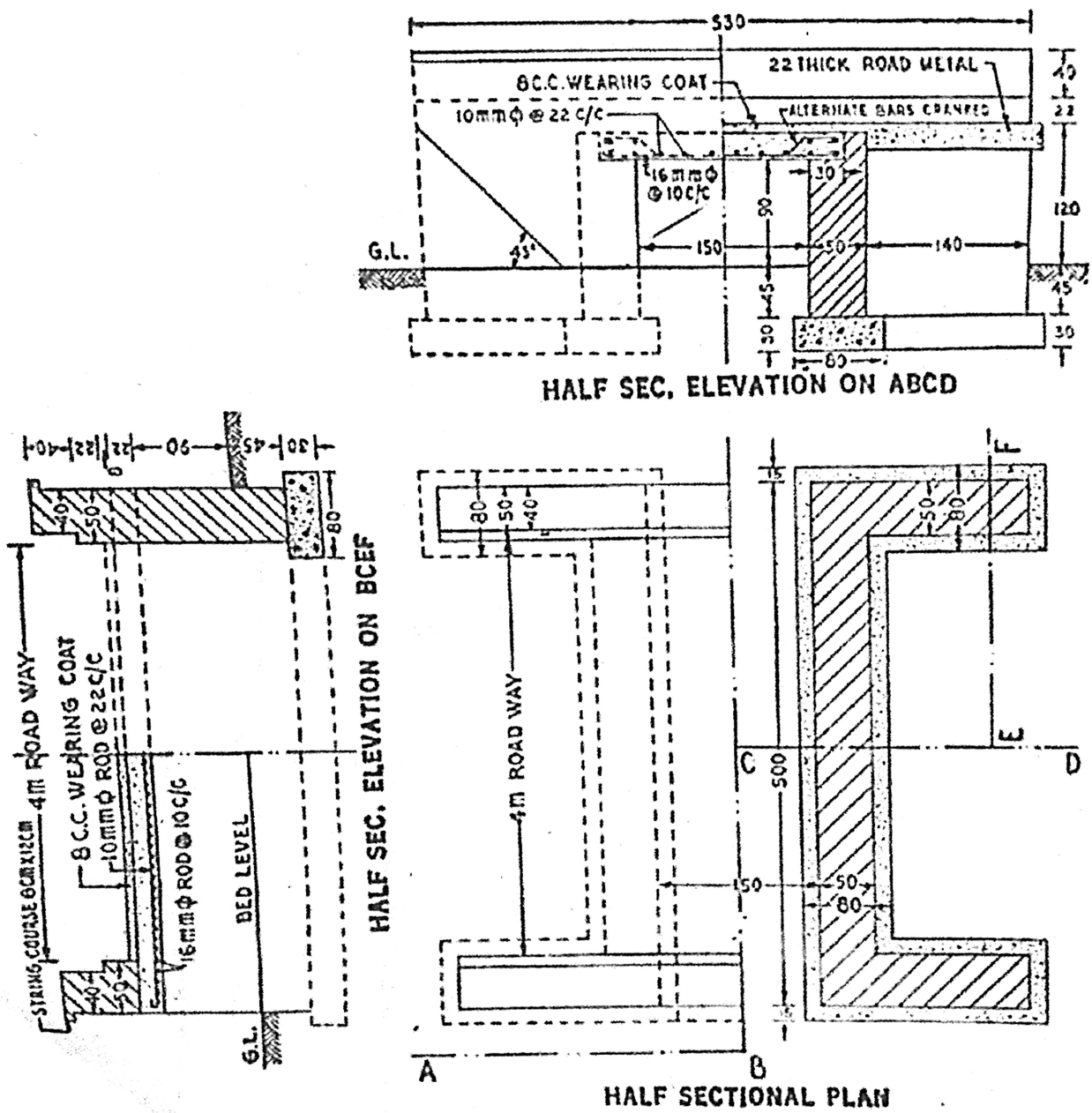


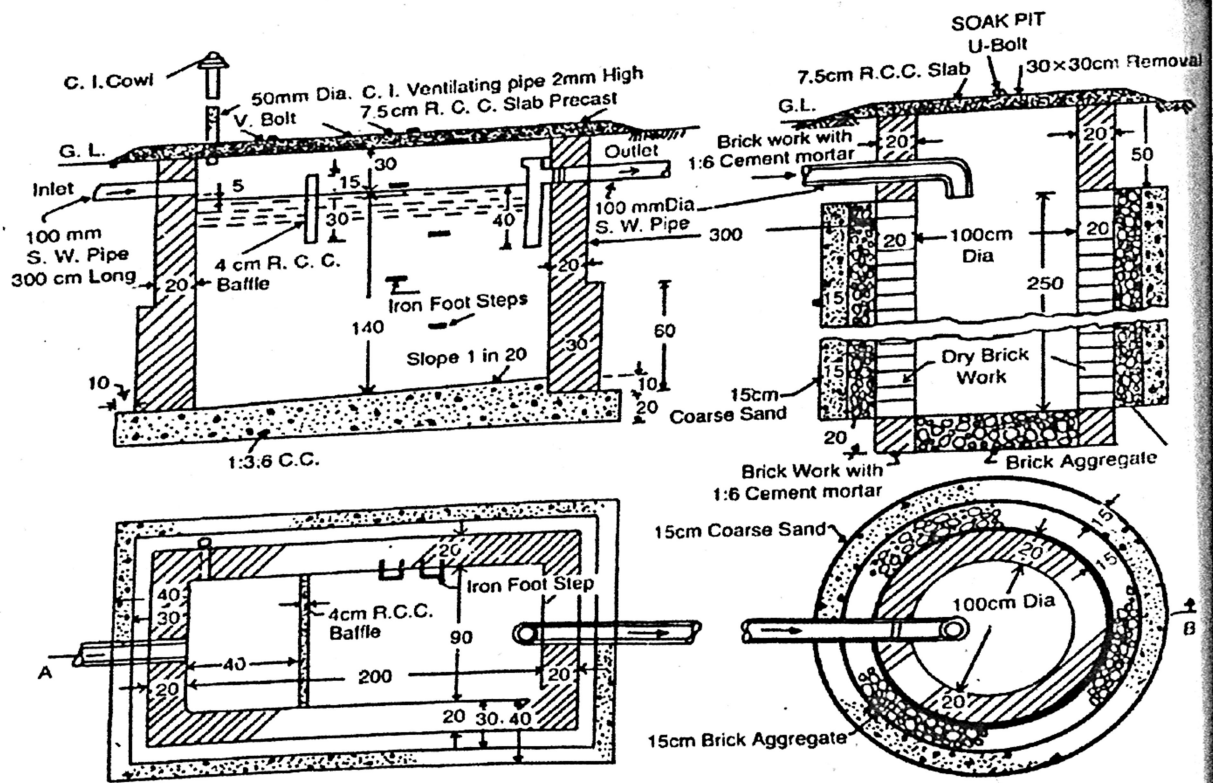
Figure 1

All dimensions in mm



All dimensions in cm

Figure 2



PLAN
All Dimensions in Centimetre unless otherwise Specified.

Figure 3

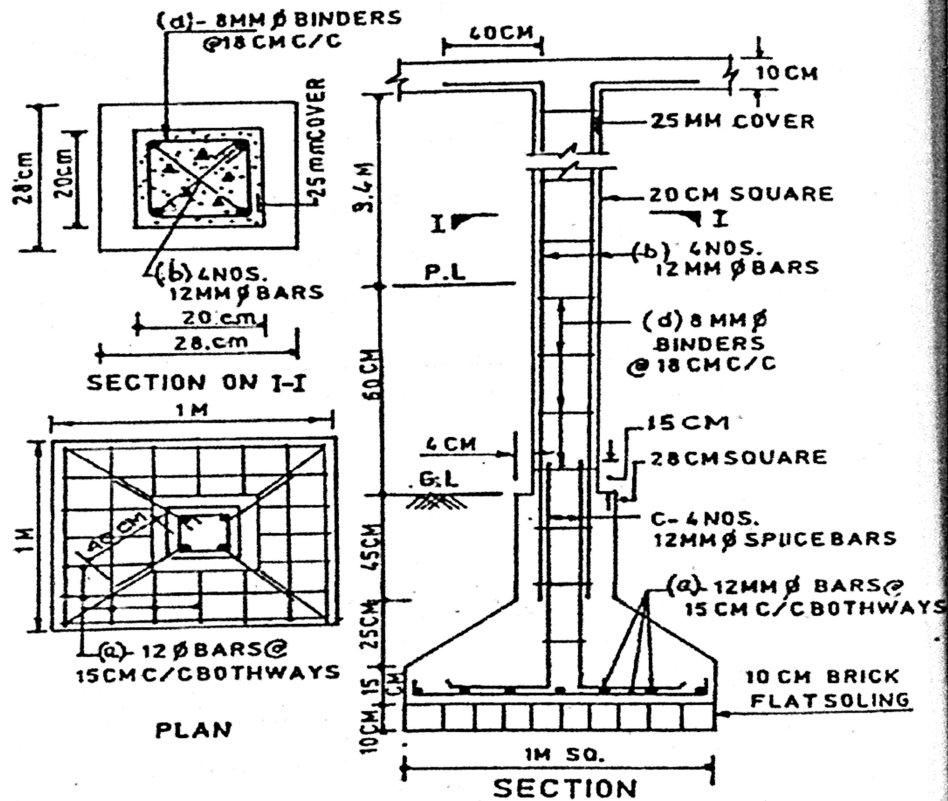


Figure 4

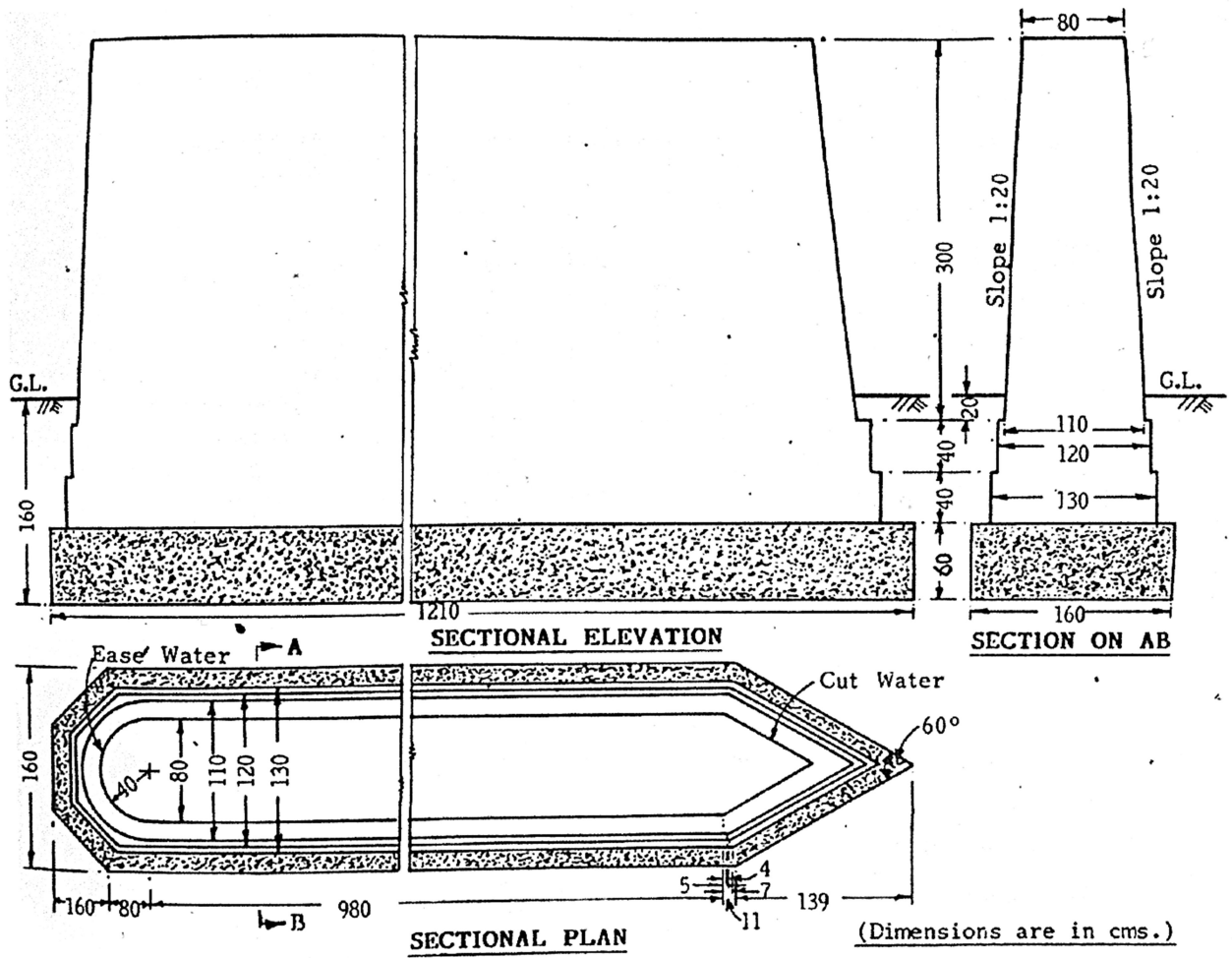


Figure 5