

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE – NOVEMBER – 2022**

**QUANTITY SURVEYING – II**  
[SKETCHES ACCOMPANIED]

(Maximum Marks : 100)

(Time : 3 hours)

**PART – A**  
(Maximum Marks : 10)

Marks

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

1. Find the length of common rafter in terms of the eave span, when the span is 3m, eave projection 60cm and rise as  $1/3^{\text{rd}}$  of span.
2. Define abutment and wing wall.
3. State Bar Bending Schedule.
4. Define specification.
5. Define annuity.

(5x2=10)

**PART – B**  
(Maximum Marks : 30)

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

1. Calculate the quantity of wood work for common rafter for a shed of inside dimension 10 x 8 m, provided with gable roof. Wall thickness 20 cm, eaves projection 50 cm, rise is  $1/3^{\text{rd}}$  of span. Size of common rafter is 50 x 125 mm and spacing between common rafters is 480 mm.
2. Calculate earth work excavation in foundation for Figure 1.
3. Prepare quantity estimate for RCC work 1:2:4 for stem and base slab for the cantilever retaining wall of length 30m shown in figure V.
4. Write detailed specification for Earthwork in excavation.
5. Work out the quantity of Plain Cement Concrete 1:3:6 in foundation for the slab culvert given in Figure IV.
6. Write short notes on:  
a) Book Value      b) Scrap Value      c) Salvage Value.
7. Discuss the term Valuation and purposes of valuation.

(5x6=30)

**PART – C**

(Maximum Marks : 60)

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

**UNIT – I**

- III.** (a) Calculate 1<sup>st</sup> class brick work 1:4 in foundation and plinth for Figure I. (8)  
(b) Calculate 1<sup>st</sup> class brick work 1:6 in superstructure for Figure I. (7)

**OR**

- IV.** Prepare quantity estimate for the following items of work for the septic tank and soak pit shown in Figure II.  
(a) Precast RCC work for tank and soak pit.  
(b) 12 mm cement plaster 1:3 with standard water proofing compound in septic tank.  
(c) 20 mm cement plaster for floor of septic tank.  
(d) 15 cm coarse sand – outer side of soak pit. (15)

**UNIT – II**

- V.** Compute the quantities of following items of work for the given Figure IV of RCC Slab culvert.  
(a) Earth work excavation in foundation.  
(b) 1<sup>st</sup> class brick work in 1:4 Cement Mortar.  
(c) RCC work 1:2:4 in slab. (15)

**OR**

- VI.** Work out the quantity of steel for stem of the given retaining wall shown in figure V. Length of retaining wall is 30m. Weight of 10mm dia. bars = 0.62 kg/m, 12mm dia. bars = 0.89 kg/m, 16mm dia. bars = 1.58 kg/m and 20 mm dia. bars = 2.47 kg/m. (15)

**UNIT –III**

- VII.** Figure III shows longitudinal section and cross sections at mid span and support of RCC lintel. Prepare detailed estimate of RCC, schedule of bars, and find total quantity of steel. Inner 12 mm diameter bars are bent up at 60° at appropriate places. L hooks are provided for all bars. (15)

**OR**

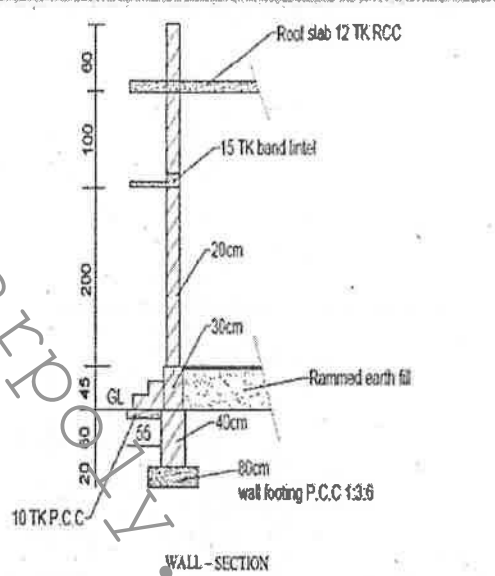
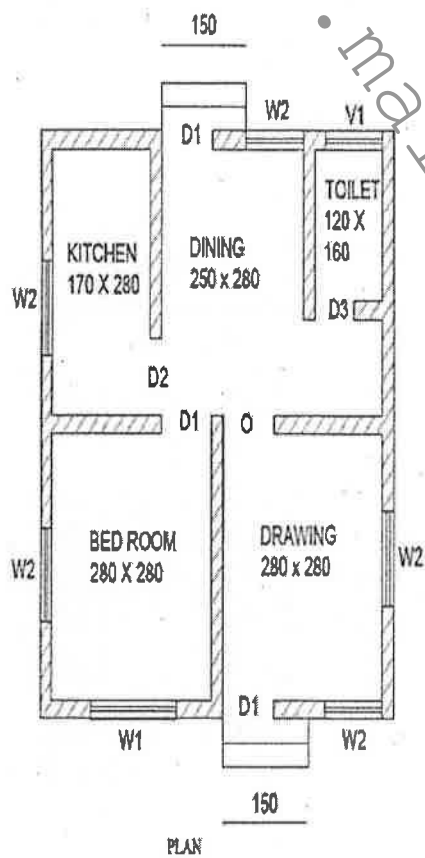
- VIII. (a) Write detailed specification for wall plastering in CM 1:3. (8)
- (b) Write detailed specification for Damp Proof Course in Cement Concrete 1:2:4. (7)

**UNIT – IV**

- IX. (a) Discuss different methods of determination of depreciation. (10)
- (b) The total cost of a new building is Rs.1,50,000. Work out the depreciated cost of the building after 20 years by straight line method, if the salvage value is Rs. 15,000, assuming the life of the building as 80 years. (5)

**OR**

- X. (a) The owner of a building gets a net annual rent of Rs. 3500. The future life of the building is estimated as 12 years, but if recommended repairs are carried out immediately at an estimated cost of Rs. 30,000, it is expected to last for atleast 30 years. Assuming the rate of interest as 8% on sinking fund and capital, determine whether it is economical to carry out the recommended repairs to the building or leave it as such. (8)
- (b) A person has purchased an old building at a cost of Rs. 90,000 on the basis that the cost of land is Rs.50,000 and the cost of building structure is Rs.40,000. Considering the future life of the building structure be 20 years, work out the amount of annual sinking fund at 4% interest when scrap value is 10% of the cost of building structure.(7)



20 cm thickness for all walls  
Tread : 25 cm  
Rise : 15 cm

All dimensions in centimeters

Mark	Item	Size (cm)
D1	Door	90 x 200
D2	Door	80 x 200
D3	Door	70 x 200
O	Opening	90 x 200
W1	Window	150 x 120
W2	Window	100 x 120
V1	Ventilator	100 x 50

Figure I



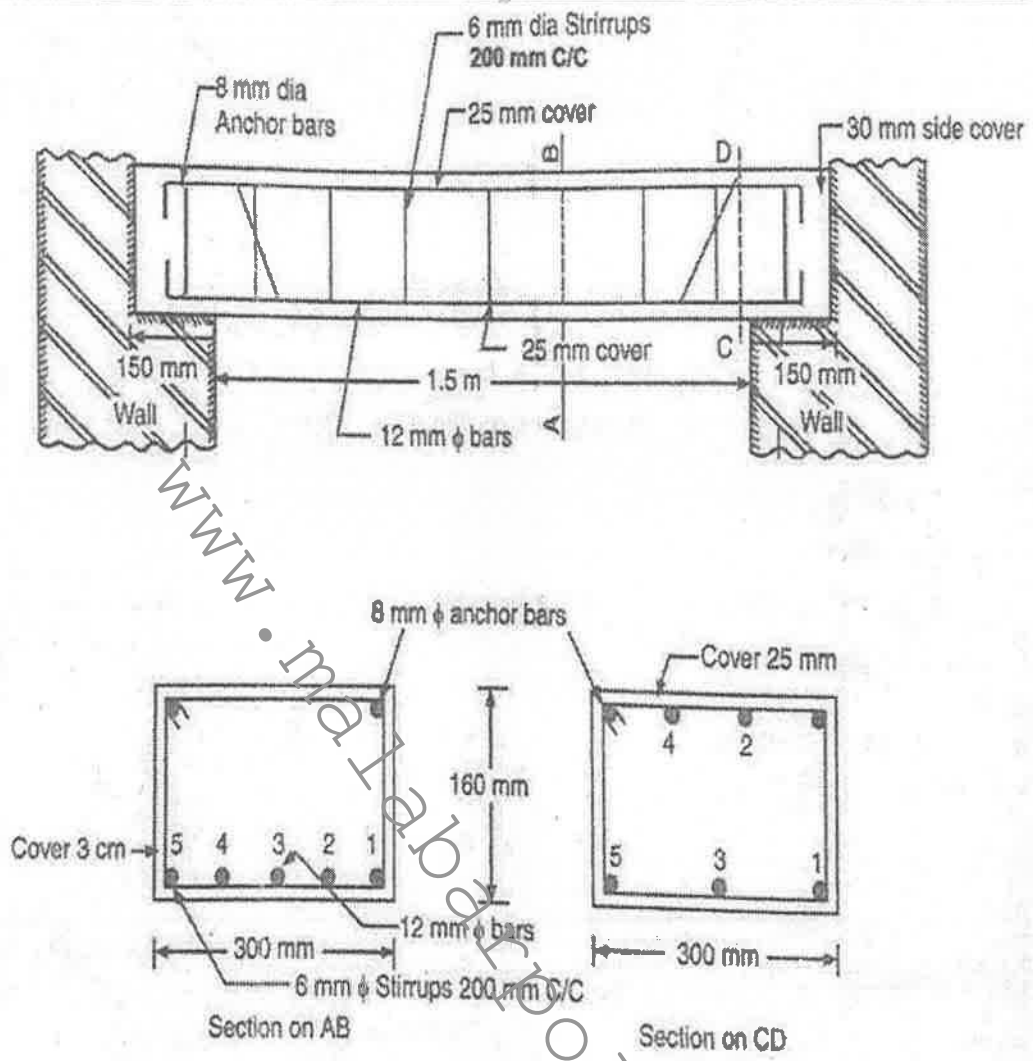


Figure III

R.C.C. SLAB CULVERT 1.50 m SPAN with standard modular bricks

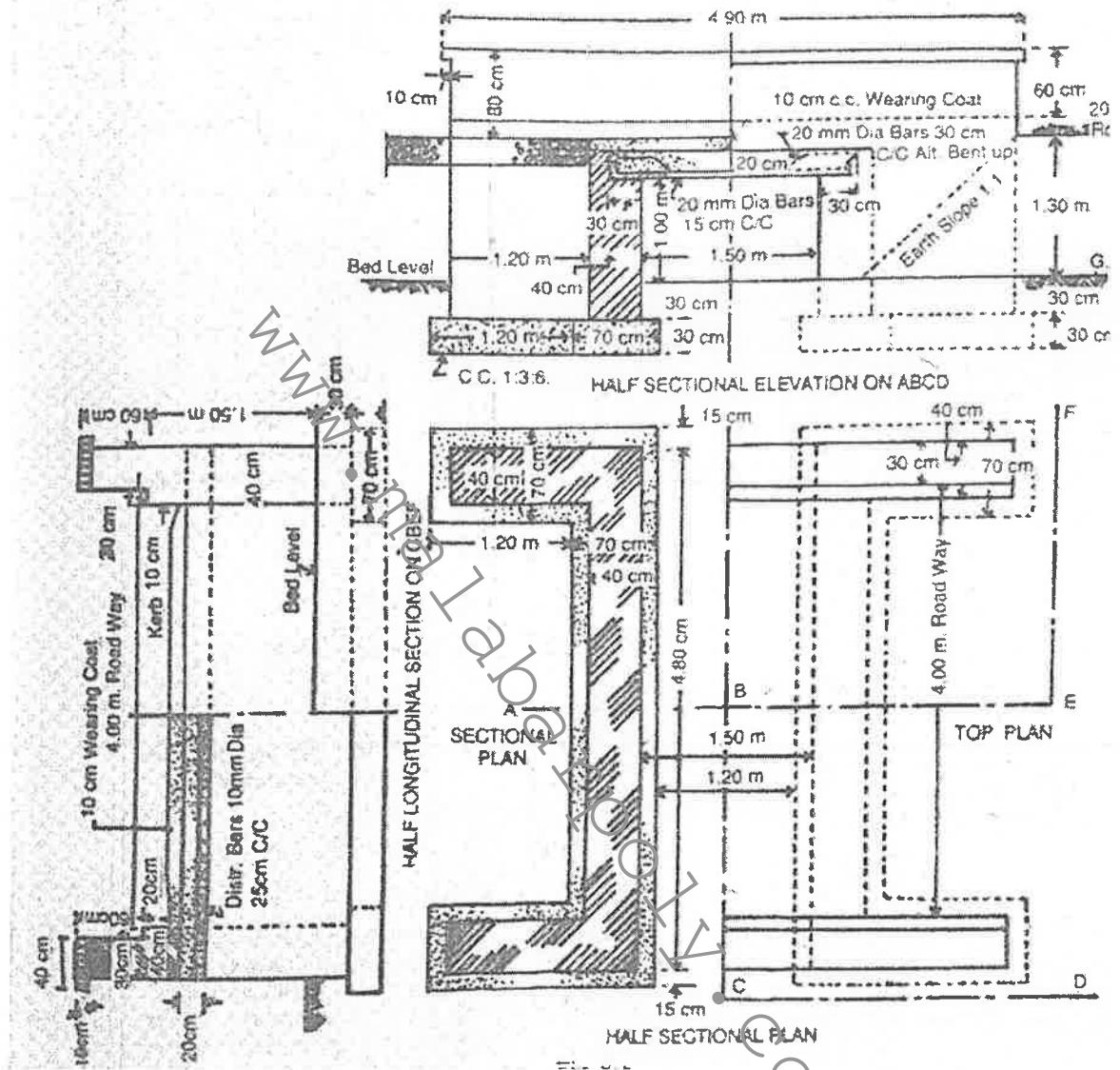


Figure IV

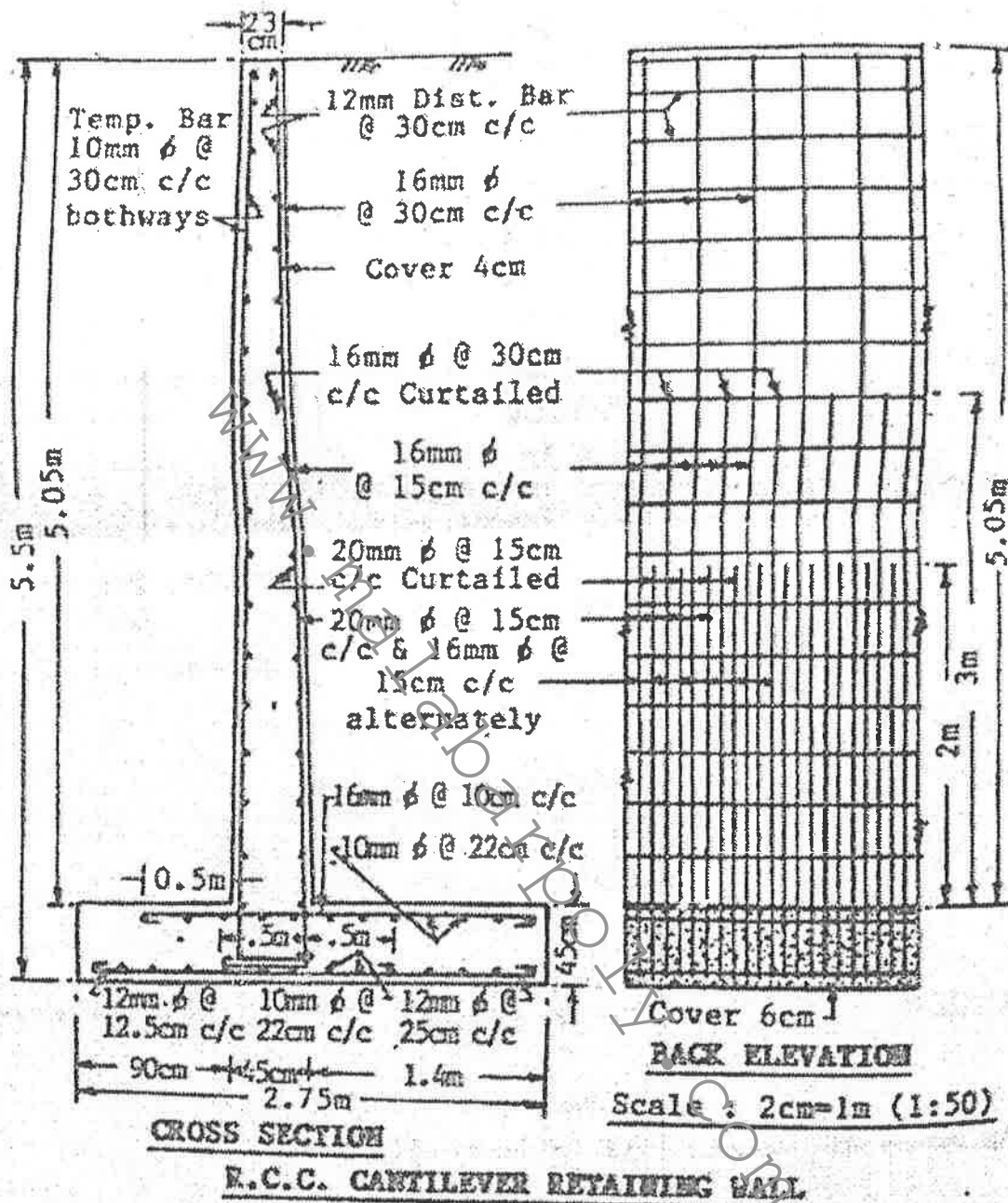


Figure V

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