TED (15) – 5014

(REVISION — 2015)

Reg. No. .....

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

QUANTITY SURVEYING - II

[*Time* : 3 hours

(Maximum marks : 100)

[*Note* :—1. Missing data if any suitably assumed.
2. Steel table is permitted.
3. Quantities are to be worked out in standard form.
4. Sketches accompanied.]

PART — A

(Maximum marks : 10)

Marks

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

1. Calculate the length of ridge in terms of eave length and eave span of a hipped roof, when the rise is 1/3 span.
2. Differentiate between abutment and wing wall of a culvert.
3. Mention bar bending schedule of reinforcement.
4. State the different types of specification.
5. Define valuation.

(5 ×2 = 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 the figure-I. Assume the size of common rafter is 50 × 125 mm, spacing between common rafter is 480 mm.
2. Determine the total plastering area of walls in figure - I of building.
3. Compute the quantity of first class brick work in cut water end of a bridge pier shown in figure - II.
4. The plan and section of column footing is shown in figure - III. Calculate the quantity of cement concrete of nominal mix 1:4:8 for base and RCC work with nominal mix of 1:2:4 in footing excluding steel.

Marks

5. Write the detailed specification of plastering.

6. State the factors governing valuation.

7. An employee purchased an old building for ₹ 4,20,000 excluding the cost of land. Calculate the annual sinking fund at 5% of interest. Assuming the future life of the building as 15 years and scrapvalue of the building as 10% of cost of purchase. (5×6 = 30)

PART — C

(Maximum marks : 60)

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

Unit — I

III (a) Calculate the quantity of hip rafter and first collar for the figure - I. The rise is 1/3 span. Assume the size of hip rafter and collar as 50 × 125 mm. The spacing between common rafter is 480 mm. 7

(b) Calculate the quantity of brick work in CM 1:5 for figure - I of building. 8

Or

IV (a) Compute the quantity of brick work in cement mortar 1:6 and dry brick work from given figure - IV in soak pit of septic tank. 7

(b) Calculate the quantity of the following items for the given steel roof truss shown in figure- V.

(i) Principal rafter.

(ii) Tie 50 × 8mm Flat beam 3.3m long.

(iii) Gusset plate. 8

Unit — II

V Determine the quantities of the following items from the figure - II of bridge pier.

(i) Earthwork excavation.

(ii) Cement concrete with a nominal mix of 1:4:8.

(iii) Brick work in cement mortar 1:5 from footing to springing level of pier. 15

Or

VI Compute the quantity of the following items from the figure-VI of RCC retaining wall.

(i) RCC work with nominal mix of 1:2:4 for stem and base slab.

(ii) Steel bars in reinforcement for stem. 15

Unit — III

VII Cross section of the RCC roof slab of 3 m clear span and 6 m long shown in figure- VII. Prepare a detailed estimate and bar bending schedule. 15

Or

Marks

VIII Write the detailed specification for the following items.

(a) Damp proof course. 7

(b) Earth work excavation. 8

UNIT — IV

IX (a) List the different methods of valuation. 7

(b) Discuss the following.

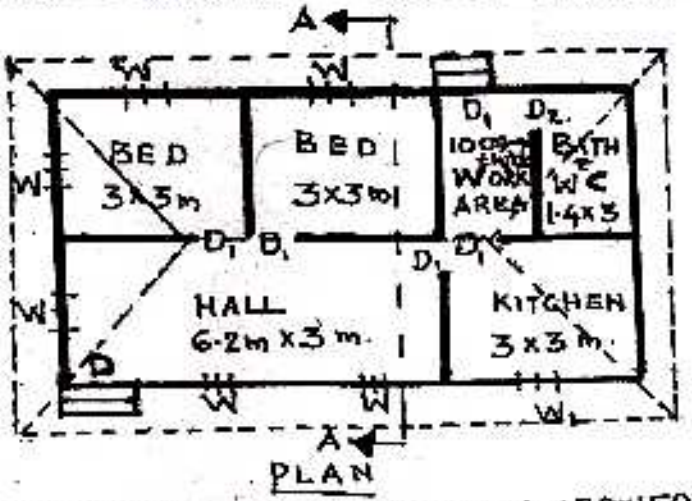
(i) Scrapvalue (ii) Salvage value

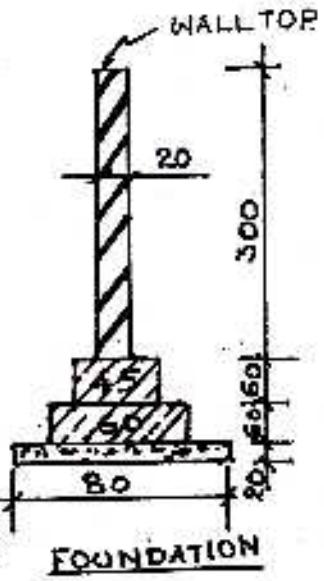
(iii) Book value (iv) Out goings 8

OR

X (a) List the methods of calculating depreciation. 7

(b) A building situated by the side of a main road of land 600 m². The built up area is 300 m². The building is first class type provided with all facility like water supply, sanitary and electrification. The rate of depreciation as 1%, the age of the building is 25 years. Assume the plinth area rate is ₹ 2500/ m². The cost of land is ₹ 1000/m². Calculate the present value of the property. 8





D - DOOR - PANELLED - 1X2.1m
D_1 - 0.9X2.1m
D_2 - 0.8X2.1m
WINDOW - 150X150 m
GLAZED W: 150X130 m
HIPPED ROOF 1/3 RISE EAVE PROJECTION 60cm.

FIG - 1

FIG II

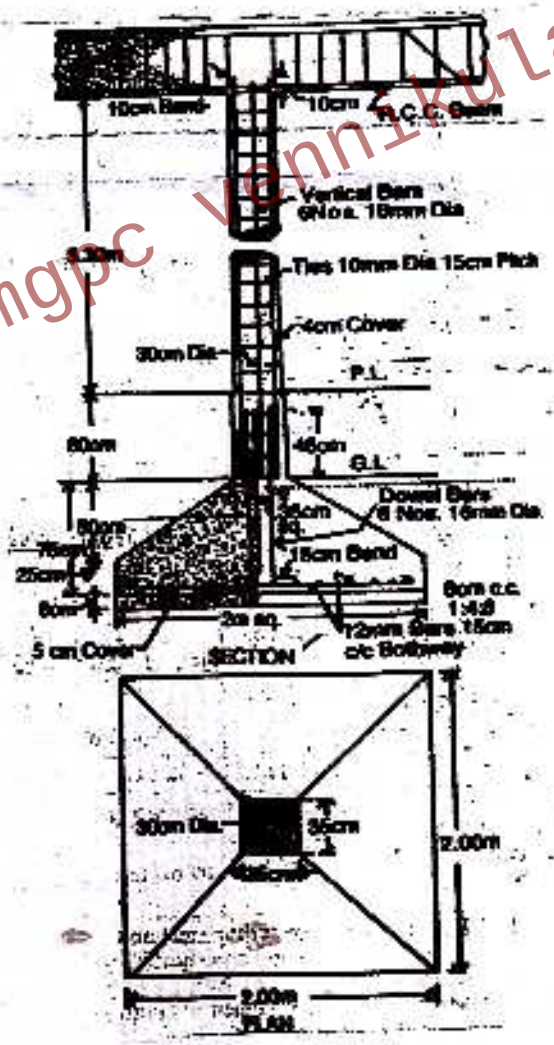


FIG III

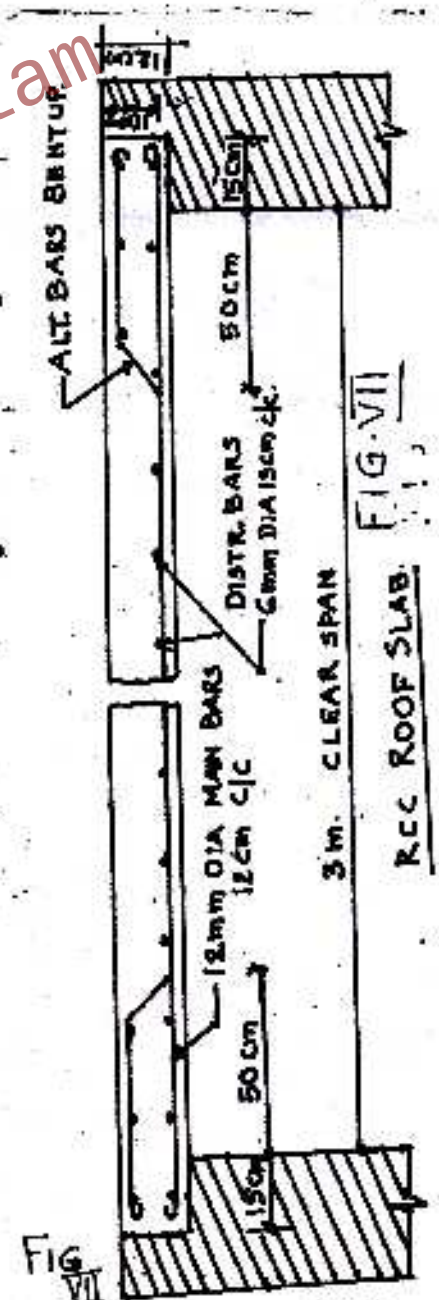


FIG VII

FIG VI

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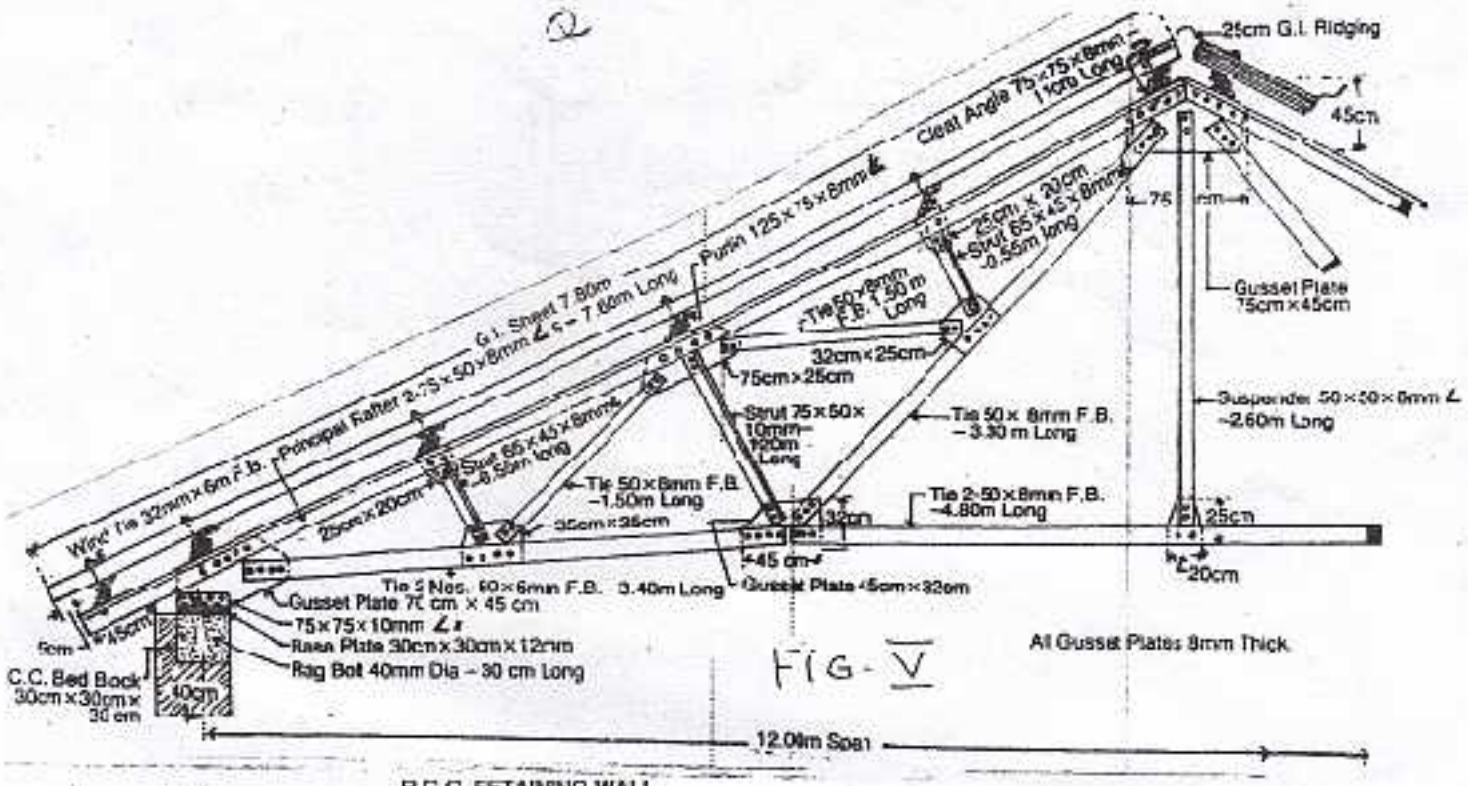

FIG - V

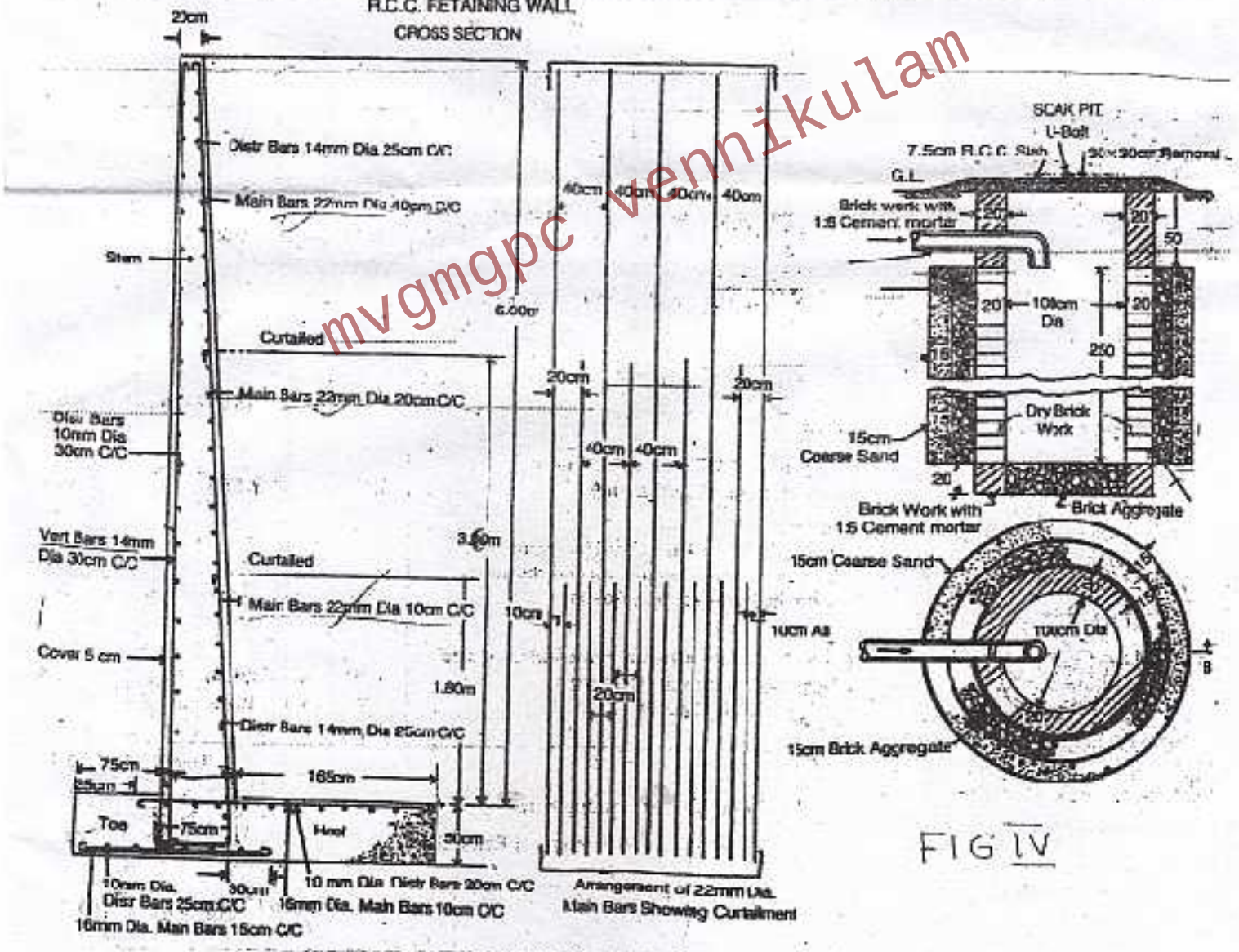

FIG - VI

FIG IV