

3425
BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL - 2019
*** DIPLOMA IN CIVIL ENGINEERING**
QUANTITY SURVEYING
FOURTH SEMESTER EXAMINATION

Time: 3 Hours

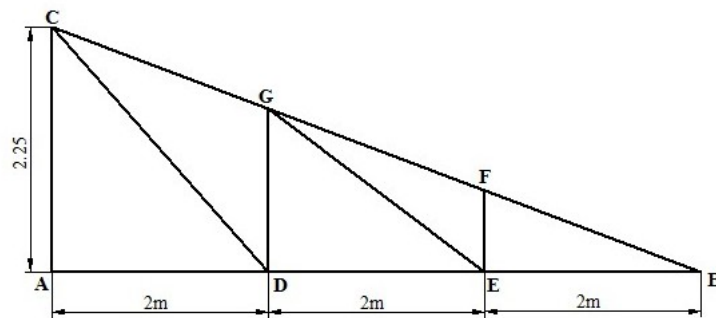
Total Marks: 80

PART - A (10 x 3 = 30 Marks)

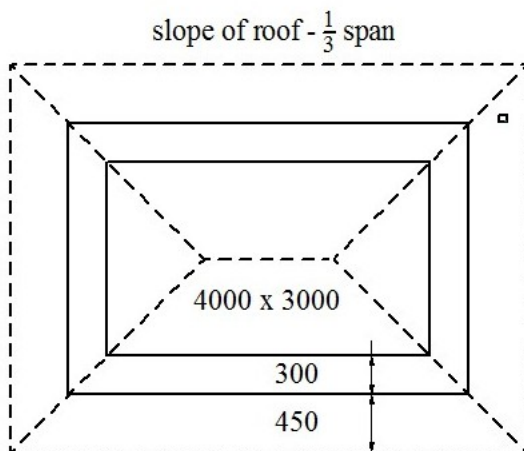
Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. Explain briefly the long wall – short wall method of estimation for a building.
2. The internal dimensions of a room are 3.0 X 3.6 m. If the thickness of wall in super structure is 230mm, calculate the centre line length for the room.
3. Calculate the length of the members DC, EG and DG for the truss shown in the figure.



4. For a hipped roof shown in fig. calculate the following
 - a) Length of ridge piece
 - b) Length of common rafters.
 - c) Length of eaves board

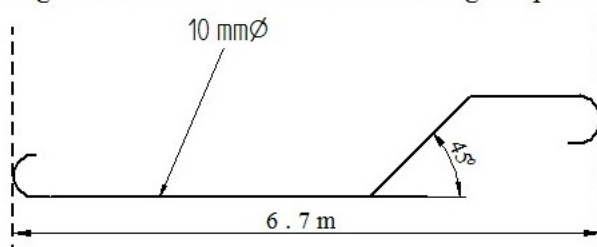


Note : All dimensions are in mm.

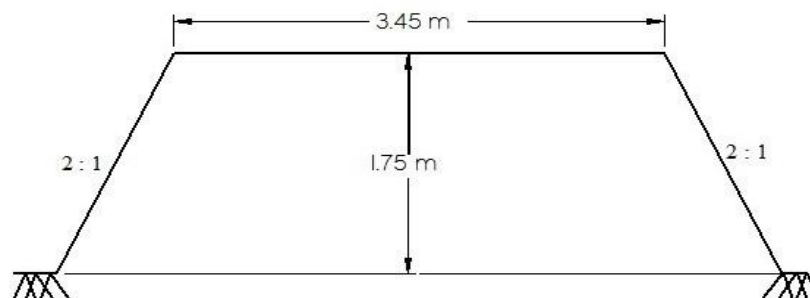
5. Calculate the quantities of ingredients for 10 cum of cement concrete of (1:2:4) proportion.

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6. Find the length of 10 mm ϕ bar as shown in fig. Depth of crank is 80 mm



7. Find the earth work in embankment for a 2.0 km Road, Whose cross section is given below.



8. Prepare the detailed estimate for laying cement concrete pavement of 1:2:4 mix with 20 mm size HBG chips 100 mm thick over the base course of C.C. 1:4:8 with 40 mm size HBG chips, 150 mm thick for a length of 500m, if the width of the road is 3.75m.
9. Define sinking fund.
10. The cost of a building including cost of land is Rs.1, 00,000. The owner expects 10% return. If the expenditure on all outgoings including sinking fund is Rs.5000. Find the gross rent of property per month.

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PART - B (5 x 10 = 50 Marks)

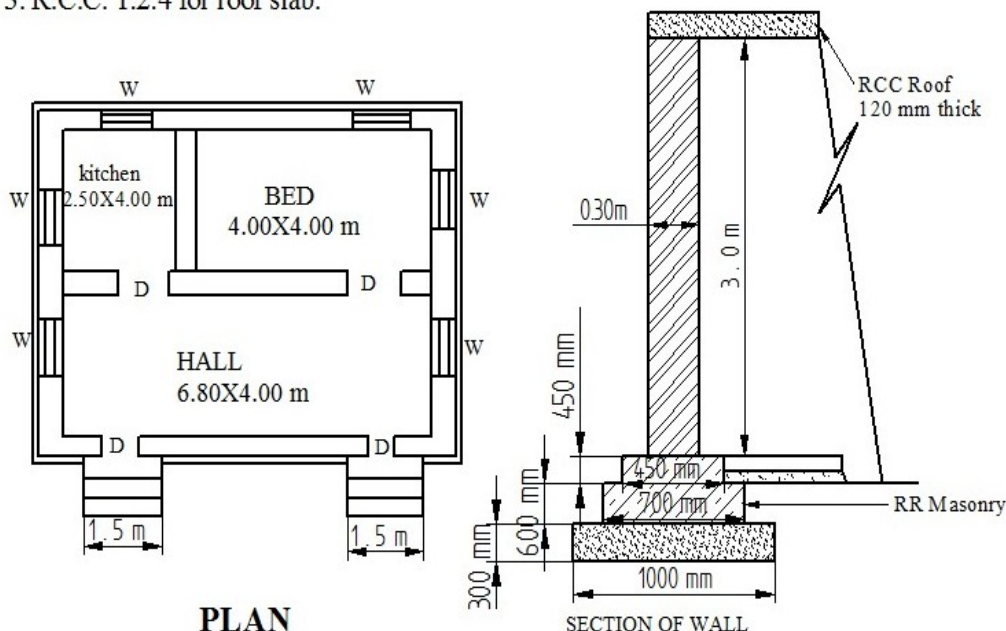
Note 1: Answer any five questions and each question carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

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Prepare the detailed estimate for the following items of work for the residential building shown in fig.

1. CC (1:5:10) for foundation bed.
2. Brick Masonry for super structure walls without deduction
3. R.C.C. 1:2:4 for roof slab.



REFERENCE:

DOOR	D 1000 X 2000
WINDOW	W 1000 X 1250

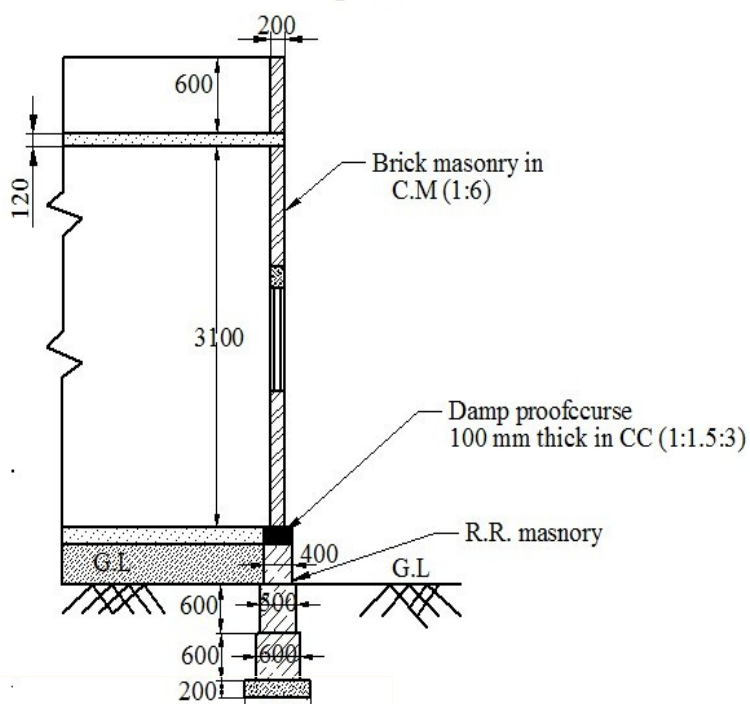
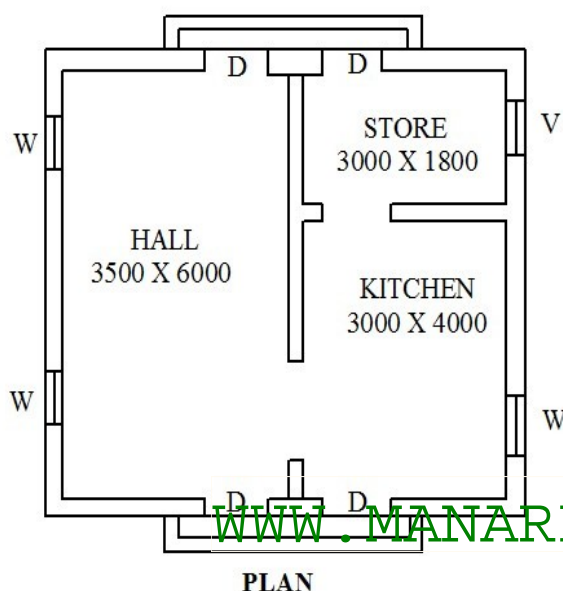
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Prepare the detailed estimate for the following items of work for the building shown in fig.

- a). Cement concrete (1:4:8) in foundation bed.
- b). Damp proof course over basement 100 mm thick in cement concrete (1 : 1½ : 3)
- c). RCC for roof slab.

REFERENCE

D DOOR	1000 X 2000
W WINDOW	1500 X 1000
V VENTILATOR	1000 X 500



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13. Prepare the data sheet and calculate the cost of items given below

a) Cement concrete (1:4:8) using 40mm H.B.G. metal unit - 1 m³

b) R.R. Masonry in C.M. (1:6) unit - 1 m³

Materials and labour required for

C.C. (1:4:8) using 40mm HBG metal- 1 cu.m	R.R. Masonry in CM (1:6)-1 cu.m
0.92 m ³ HBG metal	1.1 m ³ Rough stone
0.46 m ³ Sand	0.34 m ³ C.M 1:6
0.115 m ³ Cement	1.8 No. Mason
0.2 No. Mason	2.8 No. Mazdoor
3.2 No. Mazdoors	L.S. Sundries
L.S. Sundries	

Lead statement materials:

S.No.	Material	Rate at source	Lead in km	Conveyance per cu.m.
1	40mm HBG metal	Rs. 400/- per m ³	10KM MR	Rs.2/-per Km
2	Sand	Rs.90/- per m ³	8KM MR	Rs.2/-per Km
3	Rough stone	Rs.150/-per m ³	5KM MR	Rs.3/-per Km
4	Cement	Rs. 2200 /- per tonne	At site	

Labour charges:

a) Mason 1 st class	Rs.223.00per day
b) Mason 2 nd class	Rs.217.00 per day
c) Mazdoor	Rs.212.50 per day
d) Hand mixing charges of cement mortar per m ³	Rs.34.00

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14. Prepare the data sheet and find the cost of the following items of works:-

a) Quantities for B.M. in C.M. 1:6 using country bricks – unit - 1m^3

600 nos. Country bricks
 0.38 cum CM (1:6)
 1.4 No. brick layer
 0.7 Nos. Man Mazdoor
 2.1 Nos. Women Mazdoor
 L.S. Sundries

b) Quantities for C.M. 1:3 – flush pointing – unit - 10m^2

0.06 cum CM (1:3)
 1.6 No. brick layer
 0.5 Nos. Man Mazdoor
 1.1 Nos. Women Mazdoor
 L.S. Sundries

Lead statement:

S.No.	Materials	Rate at source Rs.	Leads in km	Conveyance charges/km
1	40 mm size broken stone	380.0/per m^3	12 KM MT	3.00/ m^3
2	Sand	75.00/per m^3	35 KM MT	3.00 / m^3
3	Country bricks	1500.00 per 1000nos.	At site	
4	Cement	2400.00/10KN or 1tonne	At site	

Labour charges:

Mason or brick layer Rs. 260/ day
 Men & women Mazdoors Rs. 180/ day
 Mixing charges Rs. 30 /cum

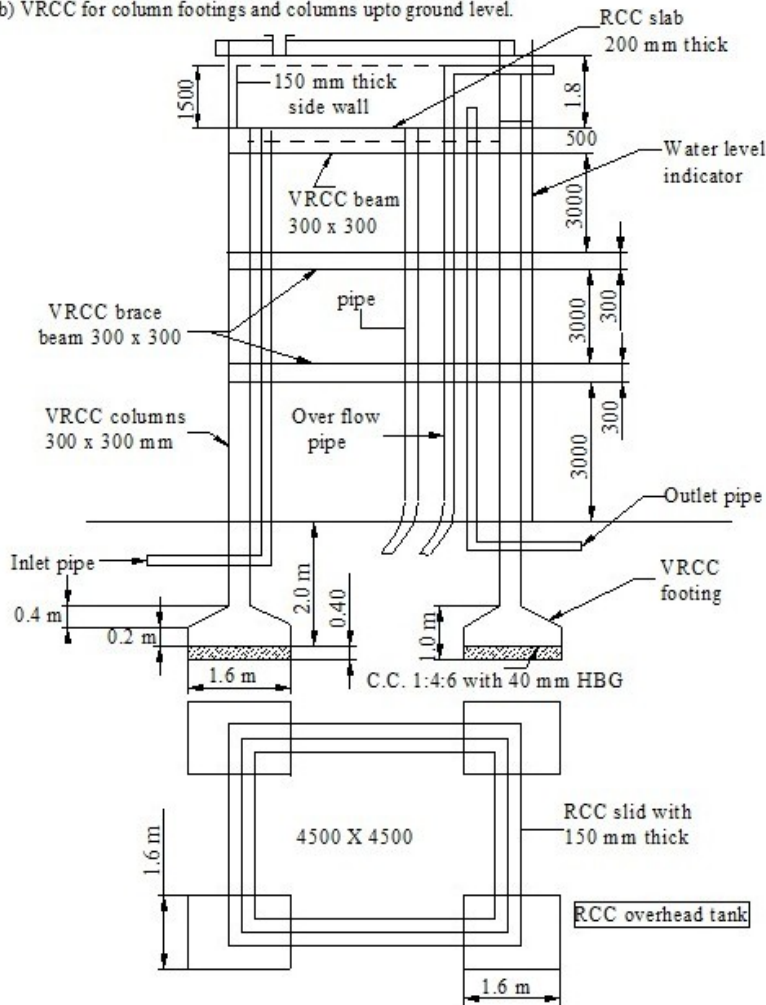
15. From the particulars of a reservoir given below, calculate the capacity of a reservoir between the sill level and M.W.L. using trapezoidal and Prismoidal rule.

Sl.No	Level in meters	Area in Sq.m	Particulars
1	40.00	1500	bed of reservoir
2	42.00	2800	
3	44.00	4200	sill level of sluice
4	46.00	6500	
5	48.00	9500	
6	50.00	12000	F.T.L.
7	52.00	15000	M.W.L.

16.

Prepare the detailed estimate for the following items for an over head tank shown in fig.

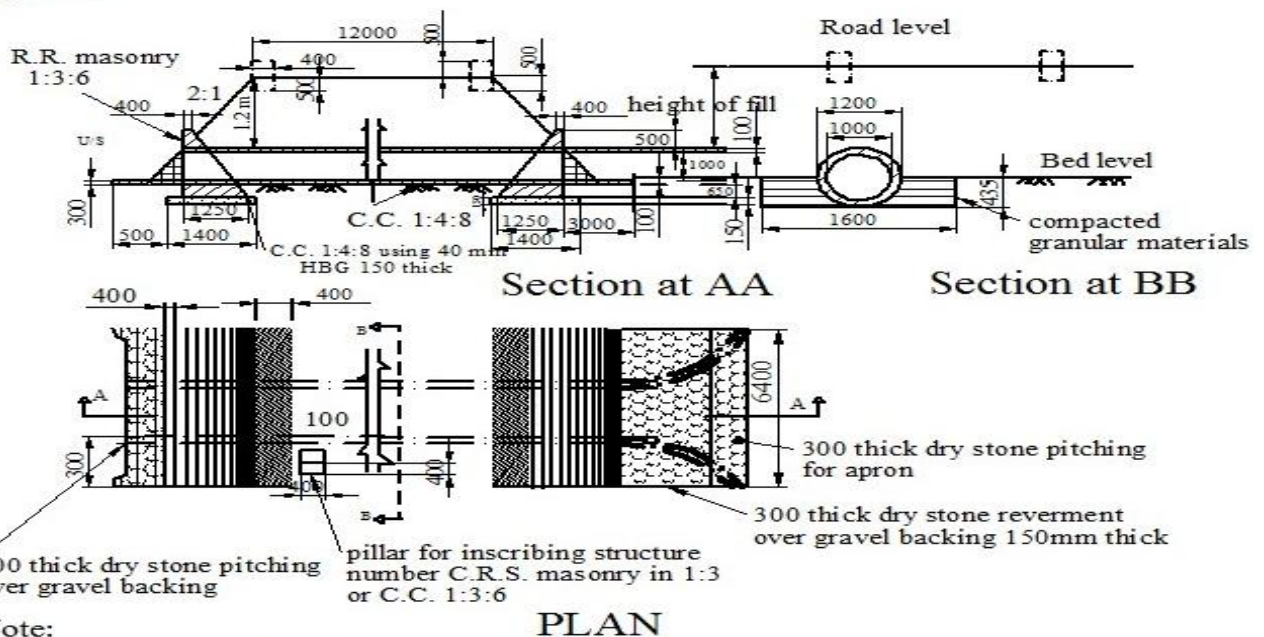
- a) Earth work excavation for column foundation
- b) VRCC for column footings and columns upto ground level.



17.

Prepare the detailed estimate for the following items of work for a pipe culvert shown in figure.

- a) C.C.(1:4:8) under head walls
- b) Compacted granular material for bedding and benching under pipe without deduction for pipe portion.



Note:

1. Longitudinal shape of pipe should minimum of in 1000 mm dia - xxx -
2. First class bedding can be used for maximum height fill of 4000 mm

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3. All dimensions are in mm

18. Explain the factors governing the valuation of a property.