



C09-C-404

3425

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH / APRIL - 2019

DCE - IV SEMESTER EXAMINATION

QUANTITY SURVEYING

Time : 3 Hours]

[Total Marks : 80

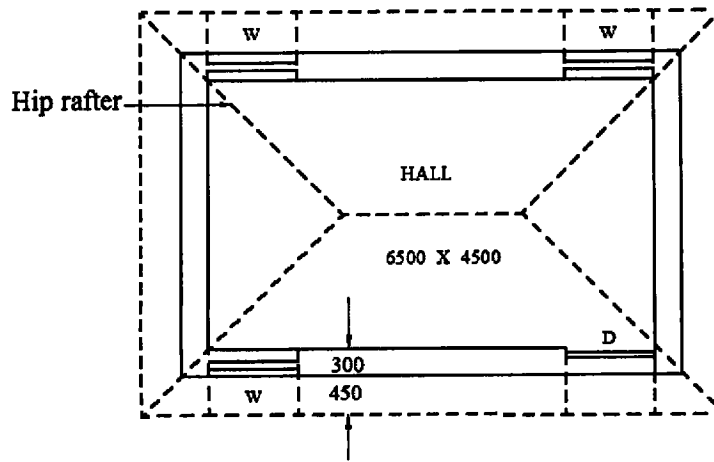
PART - A

3×10=30

- Instructions :**
- (1) Answer *ALL* questions.
 - (2) Each question carries *THREE* marks.
 - (3) Answer should be brief and straight to the point.

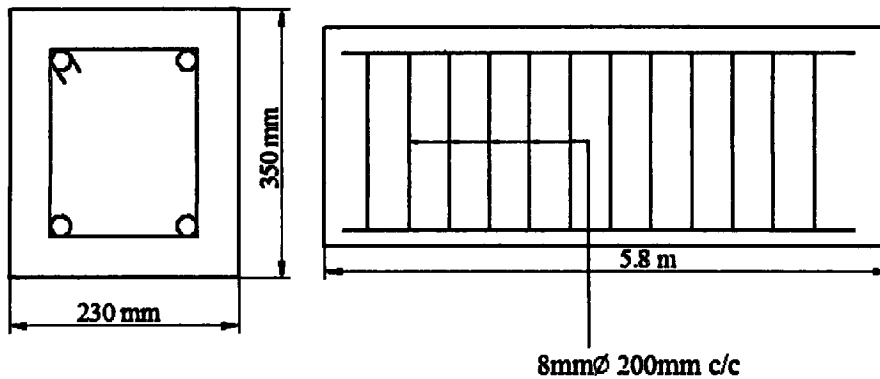
- 1 State the units of measurements of the following items :
 - (a) Doors
 - (b) Weather proof course
 - (c) RCC for slab
- 2 State the purpose of an approximate estimate and give the different methods adopted.
- 3 A room has 6.0×3.5 m internal dimensions with 300 mm wall thickness. The basement has a cross section of 400 mm width and 600 mm height. Calculate :
 - (a) Plinth area
 - (b) Brick work in C.M (1:8) in basement

- 4 For a hipped roof shown in figure, calculate
- Length of common rafter
 - Number of common rafters spaced 500 mm c/c. If the rise of roof is $\frac{1}{3}$ of span.

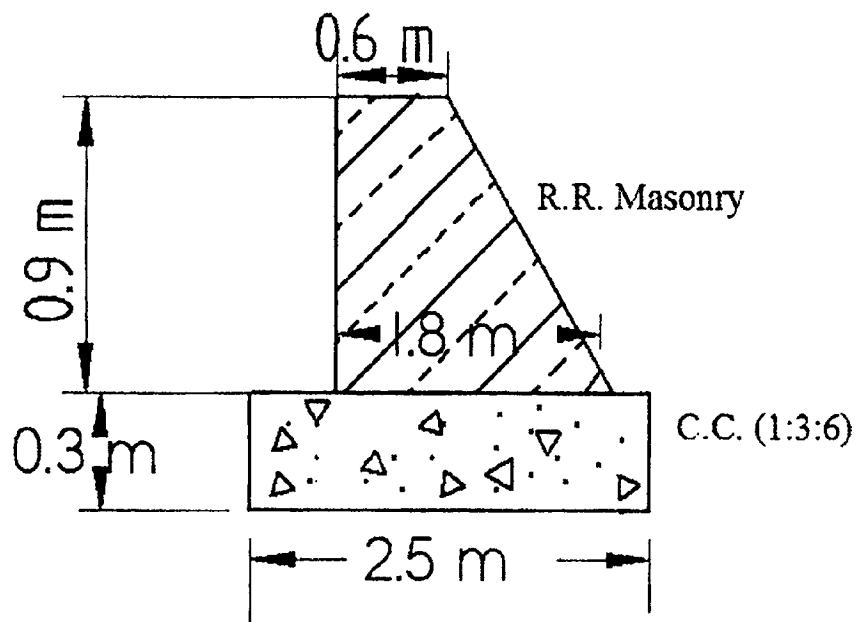


Note: All dimensions are in mm.

- Calculate the cement required in bags for preparing C.C (1:5:10) using 40 mm H.B.G. metal for 25 m³ work.
- Calculate the total weight of stirrups of 8 mm dia for a simply supported beam shown in figure. Weight of rod is 0.41 kg/m. Assume the clear cover as 25 mm.



- 7 Find the volume of the earth work in an embankment of length 100.0 m, top width 7.0 m and depth 3.5 m. The side slopes are $1\frac{1}{2}:1$.
- 8 The cross section of an abutment is shown in figure. Calculate the quantities for the following items for the length of 15 m :
- C.C. (1:3:6) for foundation
 - R.R. masonry in CM (1:6)



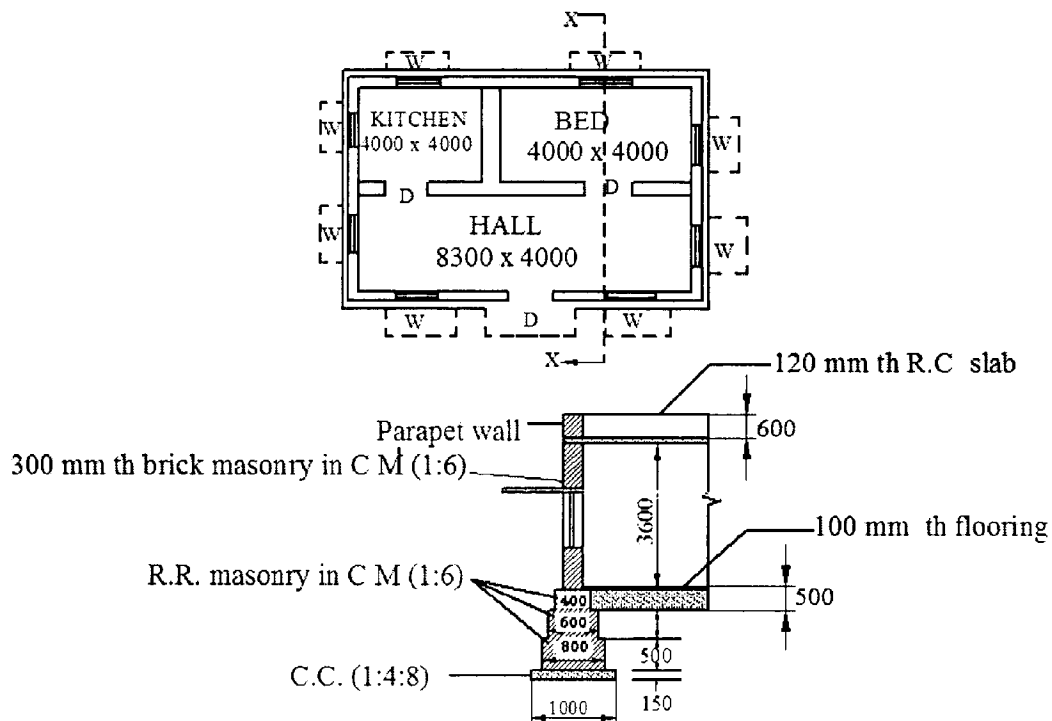
- 9 Write short notes on Market value.
- 10 Write short notes on rent fixation.

PART - B**10×5=50**

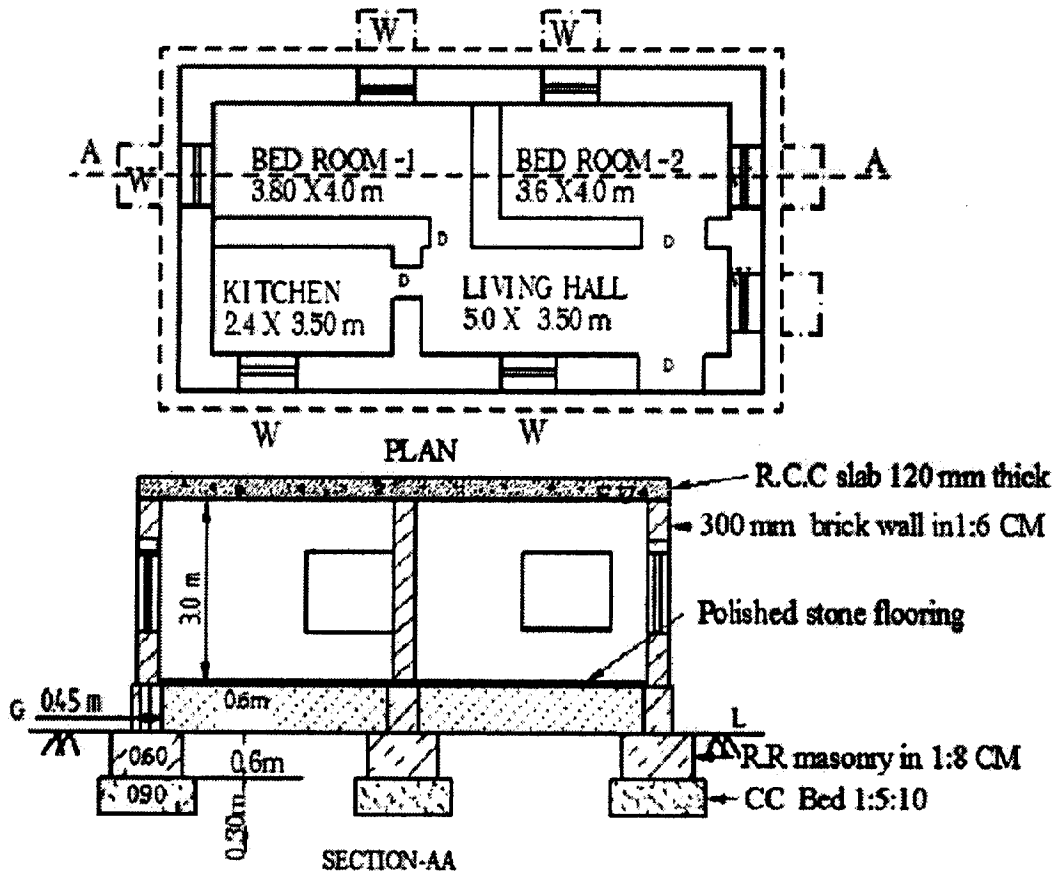
- Instructions :**
- (1) Answer any **FIVE** questions.
 - (2) Each question carries **TEN** marks.
 - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11 Prepare the detailed estimate for the following items of work for the building shown in figure :

- (a) Earth work excavation for foundation
- (b) Plastering with C.M. (1:5) 12 mm thick for super structure walls excluding parapet wall and without deductions.
- (c) RCC for roof slab.



- 12 For the building drawing shown in figure, calculate the quantities for the following items of work :
- C.C. bed (1:5:10) for foundation.
 - Quantity of brick work in super structure wall without deductions.
 - Sand filling in basement.



13 Prepare the data sheet and find the cost of the following items of works

:

- (a) Cement concrete 1:4:8 for foundation using 40mm broken stone – unit – 1 m³
 (b) Plastering with C.M. 1:4 – 12 mm, thick – unit -10m².

(i) Quantities for C.C. 1:4:8 for 1 m³.

0.92 m ³	40 mm size broken stone
0.46 cum	Sand
0.115 m ³	Cement
0.2 nos.	Mason
1.80 nos.	Man Mazdoor
1.40 nos.	Women Mazdoor
L.S.	Sundries

(ii) Quantities for plastering with C.M. (1:4) – 12 mm thick – 10m².

0.15 cum	CM (1:4)
1.1 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 Rs.
1	40 mm size broken stone	400.0 per 1m ³	12 KM MT	3.00/1m ³ /km
2	Sand	95.00 per 1m ³	35 KM MT	3.00/1 m ³ /km
3	Cement	2400.00 per 10 KN or 1 tonne	At site	

Labour charges :

Mason or brick layer	Rs. 300/day
Men and women Mazdoors	Rs. 180/day
Mixing charges	Rs. 27.50/cum

14 Prepare the data sheet for the following items of work.

- (a) Cement concrete (1:4:8) using 40 mm H.B.G. metal – unit 1 cu.m.
 0.92 cum H.B.G. metal, 40 mm size
 --- cum Sand
 --- cum Cement
 0.20 Nos. Mason
 3.20 Nos. Mazdoors
 L.S. Sundries
- (b) Brick masonry in C.M (1:6) using country bricks – Unit 1 cu.m.
 512 Nos. Country bricks for 1 cum
 0.38 cum C.M 1:6
 1.40 Nos. Brick layers
 2.80 Nos. Mazdoors
 L.S. Sundries

Lead statement of materials :

S.No.	Material	Rate at Source	Lead in km	Conveyance charges per cu.m. per km
1	40mm HBG metal	Rs. 380.00/- per m ³	12km MT + 10 Km CT	Rs. 5.50/-
2	Sand	Rs. 100/- per m ³	6 km M.T.+ 5.0 km ST	Rs. 5.00/-
3	Cement	Rs. 1900/- per 10 KN (tonne)	At site	
4	Bricks	Rs. 1500/- per 1000 Nos.	12 km M.T.	Rs. 4.00/ 1000 Nos/km.

Labour charges :

- (a) 1st class mason / 1st class brick layer Rs. 255.00/day
 (b) 2nd class mason / 2nd class brick layer Rs. 240.00/day
 (c) Mazdoor Rs. 235.00/day
 (d) Mixing charges for cement mortar / cum Rs. 40.00/cum

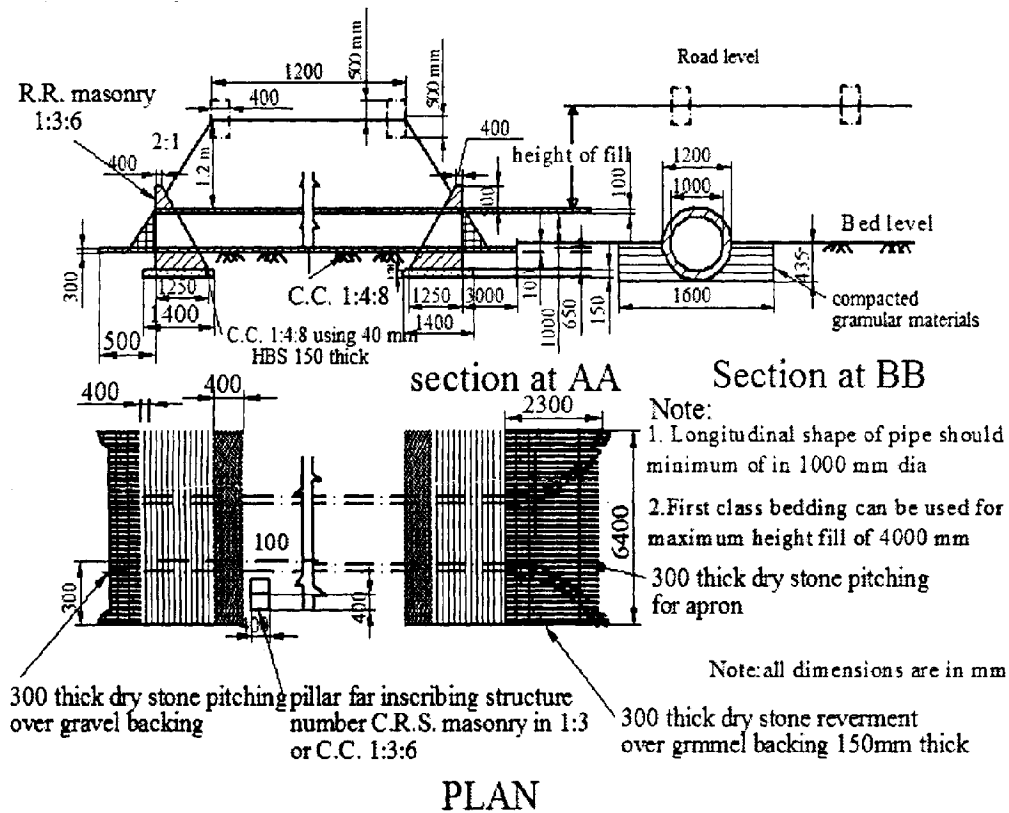
15 A road is embankment has the following data.

Chainage in 'm'	0	30	60	90	120
G.L. in 'm'	30.80	31.25	31.85	32.25	33.00

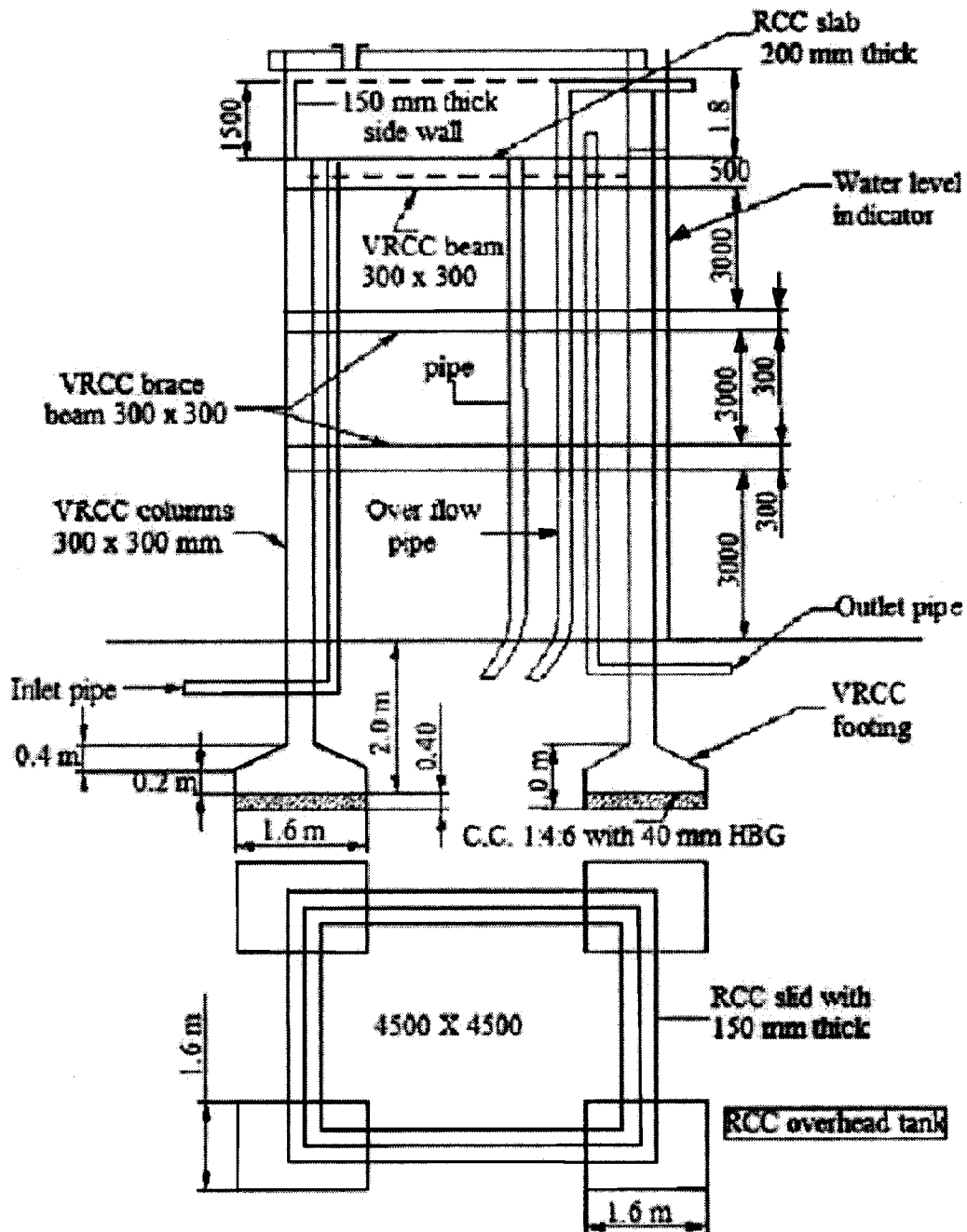
The formation level at chainage zero is 32.00 and having a rising gradient of 1 in 100. The top width is 10 m and the side slopes 2 horizontal to 1 vertical. Assuming the transverse slope of the ground is level; calculate the volume of earth work.

16 Calculate the following quantities for a pipe culvert shown in figure.

- (a) C.C. (1:4:8) under head walls
- (b) RR Masonry in CM (1:3) for head walls.



- 17 Calculate the following quantities for an over head tank shown in fig.
- Earth work excavation for column foundation.
 - RC (1:2:4) for cover slab, bottom slab and side walls.



18 A residential building of 220 sq. m. plinth areas is situated on a plot measuring 450m². The building is let out for a rent of Rs. 6000 per month. The cost of the land is Rs. 3000 per M² and the following data pertain to the outgoings.

- (i) Municipal tax's 8% of gross rent.
- (ii) Repair, Maintenance 10% of gross rent including insurance expenses.
- (iii) Sinking fund is to be provided at 4% compound interest. Calculate the capitalized value of the property for 6% net yield assuming the useful life of the building as 75 years. Assume the plinth area rate as Rs. 10,000/- per m².
