C16–C–**403**

6426

BOARD DIPLOMA EXAMINATION, (C–16)
OCT/NOV—2018
DCE—FOURTH 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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Write the formats for preparation of detailed estimation and abstract estimation.

2. Write a short note on plinth area method for approximate estimate.

3. The internal dimensions of a room are 6m × 4 m. Find the quantity of sand filling in basement, if the height and width of basement are 0.8 m and 0.4 m respectively. The wall thickness of room is 0.30 m.

4. The plan showing the gable end room. Calculate the.

   (a) Length of ridge piece

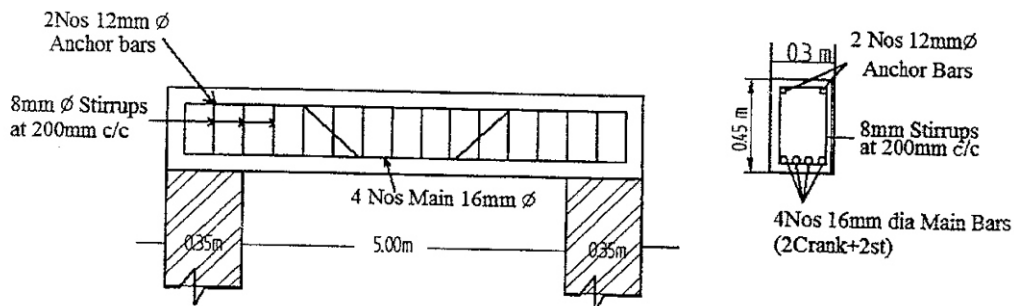*(b)* Number of common rafters spaced @ 500 mm c/c.
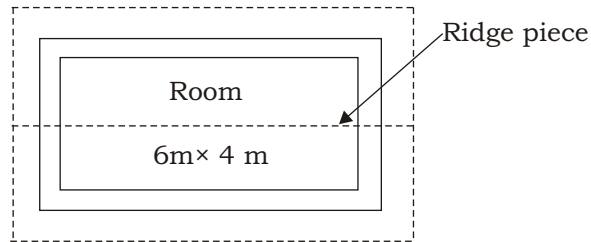
Wall thickness = 0.30 m

Eaves projection = 0.50 m

5. Define the terms :

(a) Analysis of rates

(b) Standard data book

6. Calculate the quantity of steel required for main straight bars shown in fig. Assume top and bottom clear cover as 40 mm, end cover as 25 mm, weight of 16 mm bar is 1·58 kg/m.

7. Find the volume of earth work in a embankment of length 2 km, top width is 6 m, depth is 4 m and side slops is 2 : 1.

8. An RCC square column footing of a cover head tank is shown in fig. Calculate (a) Quantity of RCC (1:2:4) footing in square portion (b) Quantity of RCC (1:2:4) footing in Trapezoidal portion.
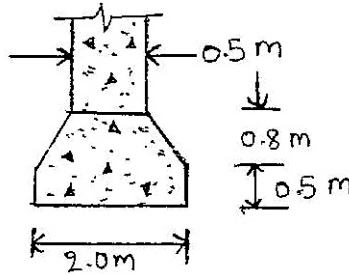
9. List any six different forms of value in connection with the valuation of property.

10. A newly constructed two storied building in heart of the city is taken for office accommodation. The cost of the building is arrived by plinth are basis including all provisions is Rs. 20,00,000. The seasonal interest on capital is 6%. Calculate monthly rent.

PART—B 10×5=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) The answers 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 the figure below :

(a) CC (1:5:10) bed for foundation.

(b) Brick masonry in CM (1:6) for superstructure wall without deductions (excluding parapet wall).

(c) Plastering with CM (1:5) 12 mm thick for inside the building without deductions.

BUILDING
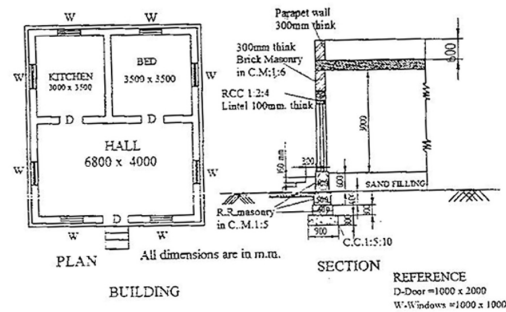
12. The plan and section of part of a compound wall was shown in the figure. Calculate the quantity of items of work as given below :

(a) Earthwork in excavation for foundation.

(b) PCC (1:4:8) bed

(c) Brick masonry in CM (1:5) required for footing and compound wall.
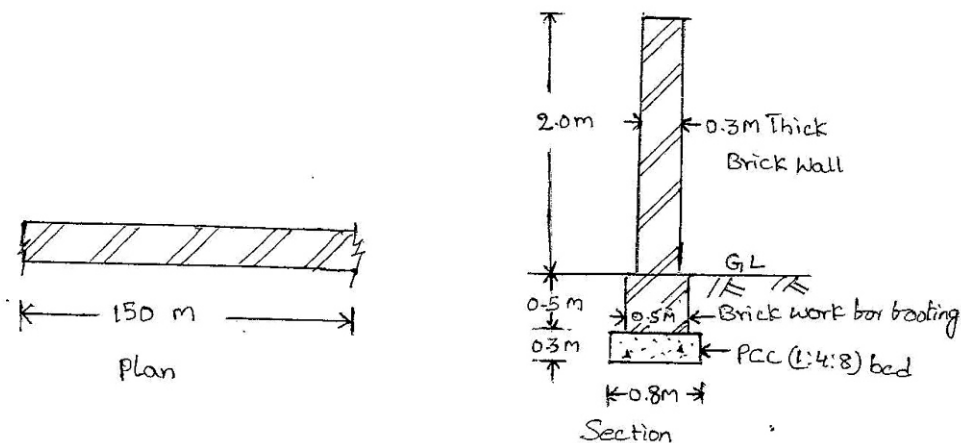
13. Prepare the data sheet and calculate the cost of the items given below :

(a) Flooring with 25 mm thick polished Shahabad stone of 1st quality of size not exceeding 400 mm × 400 mm, laid over set in CM (1:10) 16 mm thick base coat–10 sq.m.

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(b) Painting with white cement paint 1st quality two coats to walls after surface is thoroughly cleaned including cost and conveyance of materials to site etc., 10 sq. m.

   (1) Materials and labour required for flooring with 25 mm thick polished Shahabad stone–unit–10 sq. m.

10·10 sq.m.	Polished stone
0·12 cu, m.	CM (1:10)
0·96 nos.	Mason I class
2·24 nos.	Mason II class
2·20 nos.	Man mazdoor
1·10 nos.	Woman mazdoor
LS	Sundries

   (2) Painting with white cement paint–unit–10 sq. m.

3·5 kg	White cement paint
0·15 nos.	Mason I class
1·35 nos.	Mason II class
0·50 nos.	Man mazdoor
1·10 nos.	Woman mazdoor
LS	Sundries

Lead statement :

Sl. No.	Materials	Rate at source (in Rs.)	Leads (in km)	Conveyance changes/km
1	Polished stone	1650/10 sq. m	8	10/10 sq. m.
2.	Sand	150/cu.m	20	160.00 for 20 km/1 cu.m.
3.	Cement	3400/MT	Local	—
4.	White cement paint	15/kg	Local	—

Labour charges :

      1st class mason   Rs. 190·00/day

      2nd class mason   Rs. 180·00/day

      Man mazdoor   Rs. 190·00/day

      Woman mazdoor   Rs. 150·00/day

      Mixing charges for CM   Rs. 30·00/m^3

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

(a) Cement concrete (1:4:8) using 40 mm HBG metal unit—1m^3

(b) RR masonry in CM (1:6) unit—1m^3
Materials and labour required :
CC (1:4:8) using 40 HBG metal—1cu.m

0.92m^3	40 mm HBG metal
0·46m^3	Sand
0·115m^3	Cement
0·2 nos.	Mason
3·2 nos.	Mazdoors
LS	Sundries

RR masonry in CM (1:6)—1 cu.m.

1.1m^3	Rough stone
0·34m^3	CM (1:6)
1·8 nos.	Mason
2·8 nos.	Mazdoors
LS	Sundries

Lead statement of materials :
Lead statement :

Sl. No.	Materials	Rate at source (in Rs.)	Leads (in km)	Conveyance changes/km
1	40 mm HBG metal	400 per m^3	10km MR	Rs. 2 per km
2.	Sand	90 per m^3	8 km MR	Rs. 2 per km
3.	Rough stone	150 per m^3	5 km MR	Rs. 3 per km
4.	Cement	2200 per MT	Local	—

Labour charges :

(i) Mason first class   Rs. 223·00 per day

(ii) Mason second class Rs. 217·00 per day

(iii) Mazdoor   Rs. 212·50 per day

(iv) Hand mixing charges of cement mortar Rs. 34·00 per m^3

**15.** The ground levels along the ridge of proposed canal area are shown below :

Station	A	B	C	D	E	F	G
Ground levels	252.0	252.15	251.70	251.75	251.95	251.85	252.0

The bed of the canal is 4.0 m wide and sloped 1 in 100 downwards in longitudinal direction. The side slopes are 2:1 and the bed level of canal at A is 250.00. Determine the volume of the earth work in cutting, if the chainage between the points is 20 m by

(a) Trapezoida Rule

(b) Prismoidal Rule

16. Prepare the detailed estimate for the cement concrete road of 1.50 km length for the following items of work as shown in the figure below :
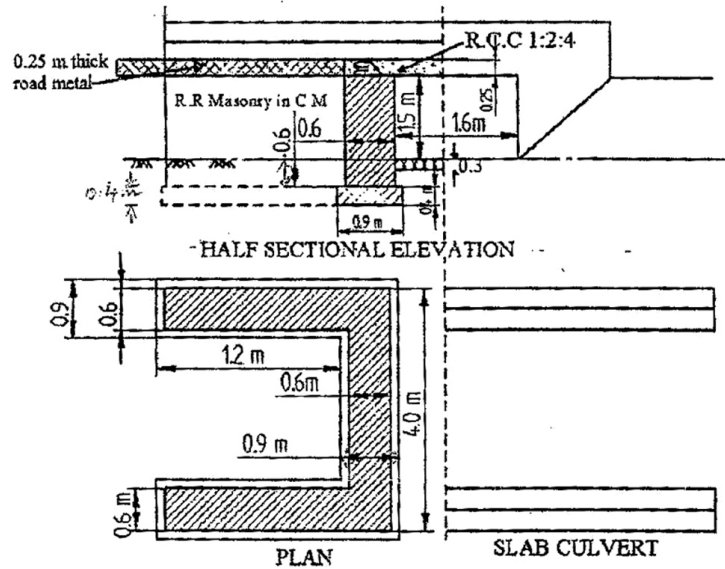
(i) Wearing coat of CC (1:2:4) with 20 mm size HBG metal 100 mm thick

(ii) Base coarse of CC (1:4:8) with 40 mm size HBG metal 150 mm thick.
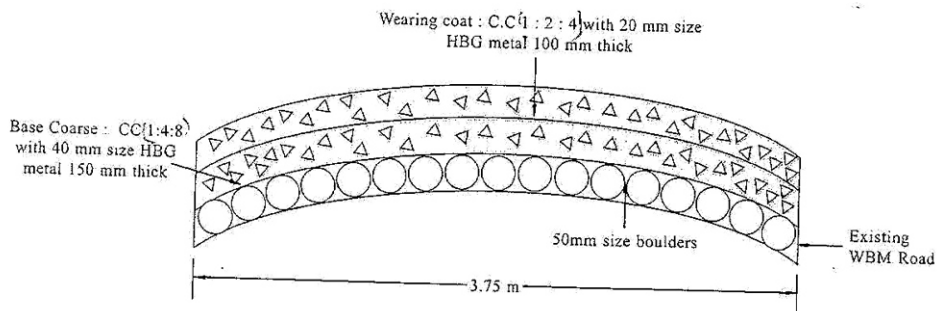
17. Prepare the detailed estimate for the following items of work for a slab culvert shown in the figure :

(a) Earth work excavation for foundation for abutments and returns.

(b) CC (1:4:8) for abutment and returns.

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(c) RCC (1:2:4) for deck slab.

0.25 m thick road metal

R.C.C 1:2:4

R.R Masonry in C M

0.6 | 0.6

1.15 m | 0.25

1.6m

0.4 | 0.3

0.9 m

HALF SECTIONAL ELEVATION

0.9 | 0.6

1.2 m

0.6m

0.9 m

4.0 m

0.6 m

PLAN

SLAB CULVERT

18. The total cost of the newly constructed building is Rs. 15 lacks. Find the depreciation cost of building after 25 years by

(a) Straight line method and

(b) Constant percentage method If the scrap value of the building is Rs. 1,20,000. Assume the life of building as 80 years.

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