C14-C-**403**

4426

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2018
DCE—FOURTH SEMESTER EXAMINATION

QUANTITY SURVEYING - I

Time : 3 Hours]   [*Total Marks* : 80

PART—A   3×10=30

Instruction : (1) Answer **all** questions and each question carries **three** marks.

(2) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.

1. Define estimate.

2. State the units of the measurement for the following items.   (6 × 0.5 =3)

   (a) D.P.C of specified width and thickness

   (b) R.C.C sunshade with specified width and thickness

   (c) Fencing

   (d) Ornamental border of specified width and thickness

   (e) Excavation of pipe line of specified width & depth in all types of soils

   (f) Rough stone pitching, revetment

3. Define lead and lift. Aslo write their standard values.   (2+1)

4. Find the area of cutting if the bottom width of the canal is 7.5m & depth is 1 m with side slopes 2:1.

5. List the different methods of calculating volume of earthwork.

6. Differentiate between Approximate estimate and Detailed estimate.

7. Write a short notes on cubic content method.

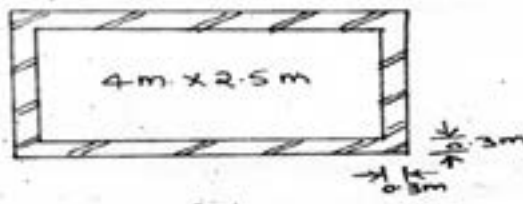**8.** Calculate the length for brick masonry required for the room shown in fig 1.

<div align="right">5×10=50</div>

fig.1

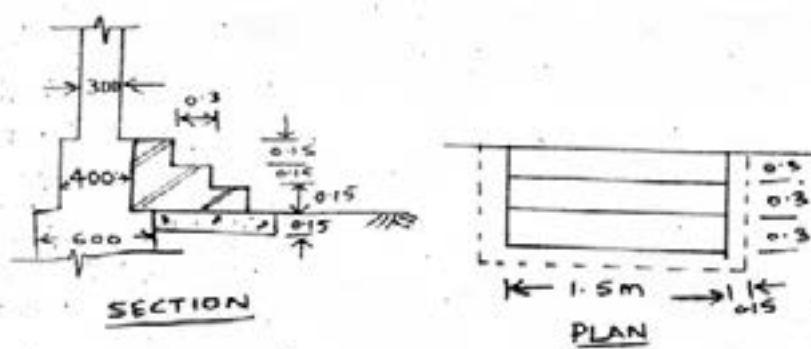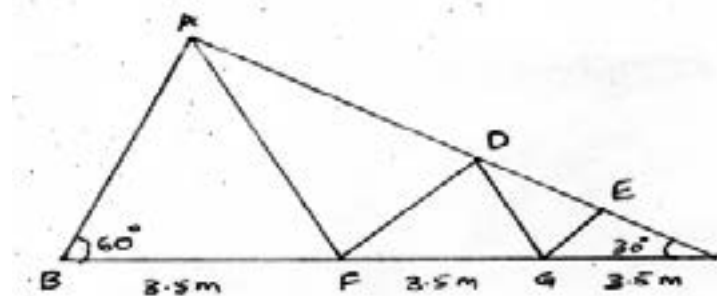**9.** Calculate the brick masonry required for the steps shown in fig. 2.

SECTION   PLAN

fig.2

10. Calculate the length of members AB, DF, EG, AD, DE & EC of light roof truss fig 3.

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

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

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. State the need for quantity surveying and write the duties of quantity surveyor.

(5+5)

12. The road has the following data

Chainage in 'm'	0	30	60	90	120	150	180	210	240
GL in 'm'	30.8	31.25	31.85	32.25	33.00	33.65	34.50	34.85	35.50

The formation level at chainage zero is 32.00 m and having a rising gradient of 1 in 120. The top width is 10m and the side slope is 2:1. Assuming the transverse slope of the ground is level, calculate the volume of earthwork by prismoidal rule.

13. From the particulars of a reservoir given below, calculate the live & dead

storage of a reservoir with the following data:

SI NO	Level in 'm'	Area in m2	particulars	SI NO	Level in 'm'	Area in m2	particulars
1	100	1200	Bed level	7	130	1830	
2	105	1350		8	135	1900	
3	110	1500		9	140	1950	Sill level
4	115	1550		10	145	3600	
5	120	1600		11	150	5700	F.T.L
6	125	1700		12	155	8900	M.W.L

14. State and explain different types of estimates. (1.5+8.5)

15. Answer the following (7+3)

(a) Prepare a rough estimate for the proposed commercial complex for a municipal corporation for the following data.
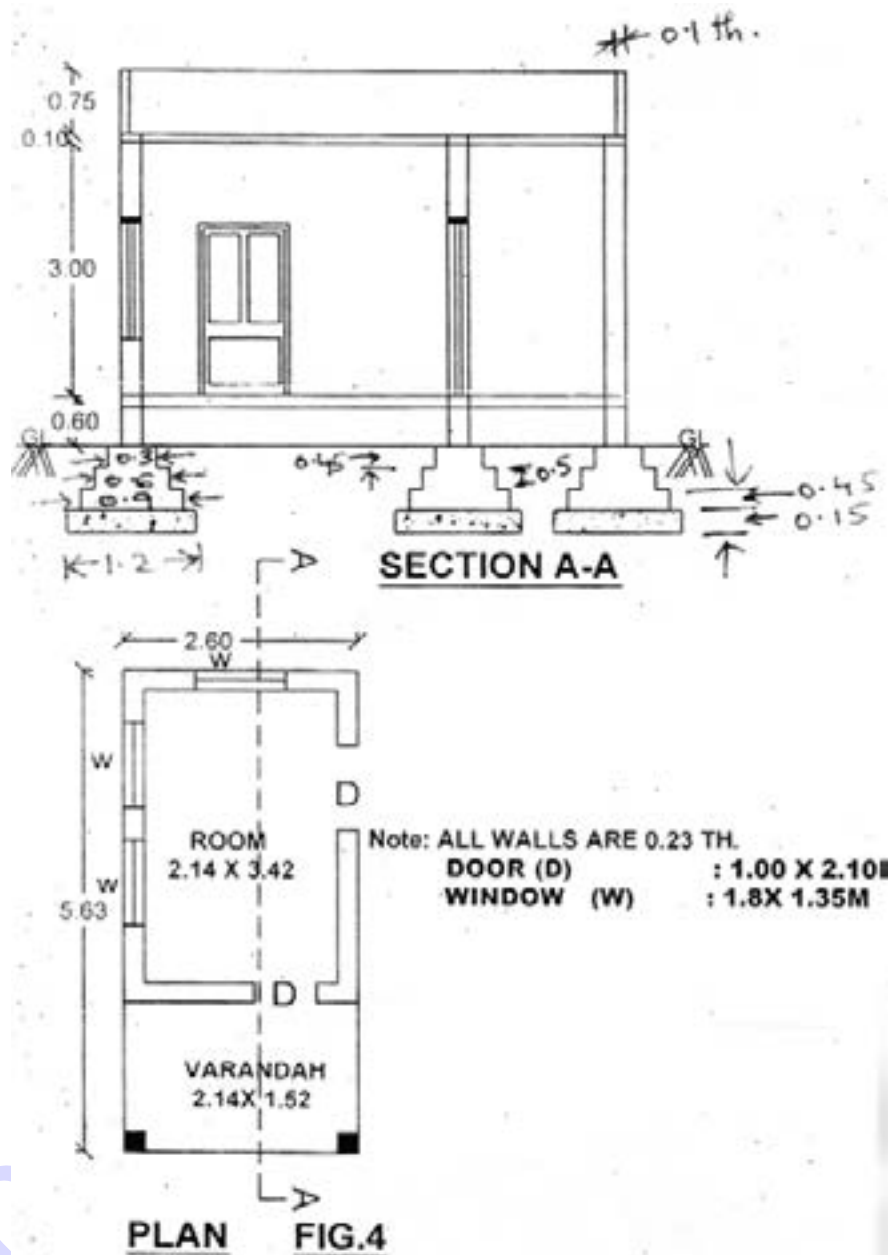
• Plinth area = 500 m^2 / floor

- Height of each floor = 3.6m

- No. of storey's = G+3.

- Cubical content rate = Rs. 1,000/- per m^3

- Water supply and sanitation — 8% of building cost

- Electrification = 6% of building cost

- Contractor's profit = 10% of building cost

- Fluctuation of rates = 5% of building cost

- P.S. and contingencies — 3% of building cost

   (b) Prepare an approximate estimate of a hospital building in a primary health center for 20 beds. The cost of construction for each bed is arrived at Rs 50,000/- by considering the recent hospital building construction.

16. Find the quantity of following items of the building shown in the fig.4 using centre to centre line method.

   (a) Earth work excavation

   (b) P.C.C. (1 : 4 : 8) foundation

   (c) Brick masonry for the footings

   (d) Brick masonry for parapet wall.

0.75
0.10
3.00
0.60
GL
SECTION A-A
0.45
0.15
K-1.2

2.60
W
W
D
ROOM
2.14 X 3.42
W
5.63
Note: ALL WALLS ARE 0.23 TH.
DOOR (D) : 1.00 X 2.10
WINDOW (W) : 1.8X 1.35M
D
VARANDAH
2.14X 1.52

PLAN   FIG.4

17. Find the quantity of following items of the building shown in the fig. 4 using long wall and short wall method.

18. Calculate the quantity of steel required for the steel truss shown in fig. 5

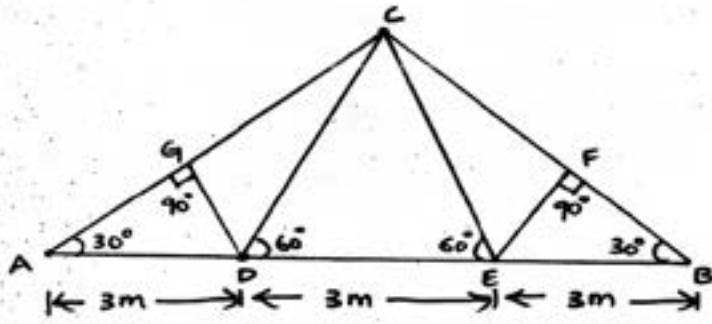(a) main members @ 56 kN/m

(b) struts @ 45 kN/m

Fig.5

***