

**ANSWER ANY THREE QUESTIONS
TIME 2 HRS**

**MEASUREMENT OF BUILDING WORKS
EBC2305
DBCE 13S AND DBCE 14J**

Question one

- a) Highlight **FIVE** roles of the quantity surveyor in the following stage of construction.
- i. Pre-contract stage
 - ii. Construction stage
 - iii. Post-contract stage
- (15 marks)
- b) Draw a dimension paper, name each column and briefly explain the function of each column. (5marks)

Question two

- a) Briefly explain **FIVE** methods of valuing variation in a building project. (10marks)
- b) Highlight **TEN** duties of an estimator in the construction industry. (10marks)

Question three

- a) Define the following terminologies as used in measurements
- i) Taking off
 - ii) Booking
 - iii) Ditto
 - iv) Ampersand
 - v) Bracketing
 - vi) Cancellation
- (12marks)
- b) Explain the following terms
- i) Deemed to be included item
 - ii) Spot items
 - iii) Extra over items
 - iv) Contingency sum
- (8marks)

Question four

- a) Briefly explain **SIX** types building contracts which may be used in the construction industry. (12marks)
- b) Briefly explain the cut and shuttle method of bill preparation (8marks)

Question five

- a) By highlighting **FIVE** cases compare and contrast between a standard method of measurement and the civil engineering standard method of measurement. (5marks)

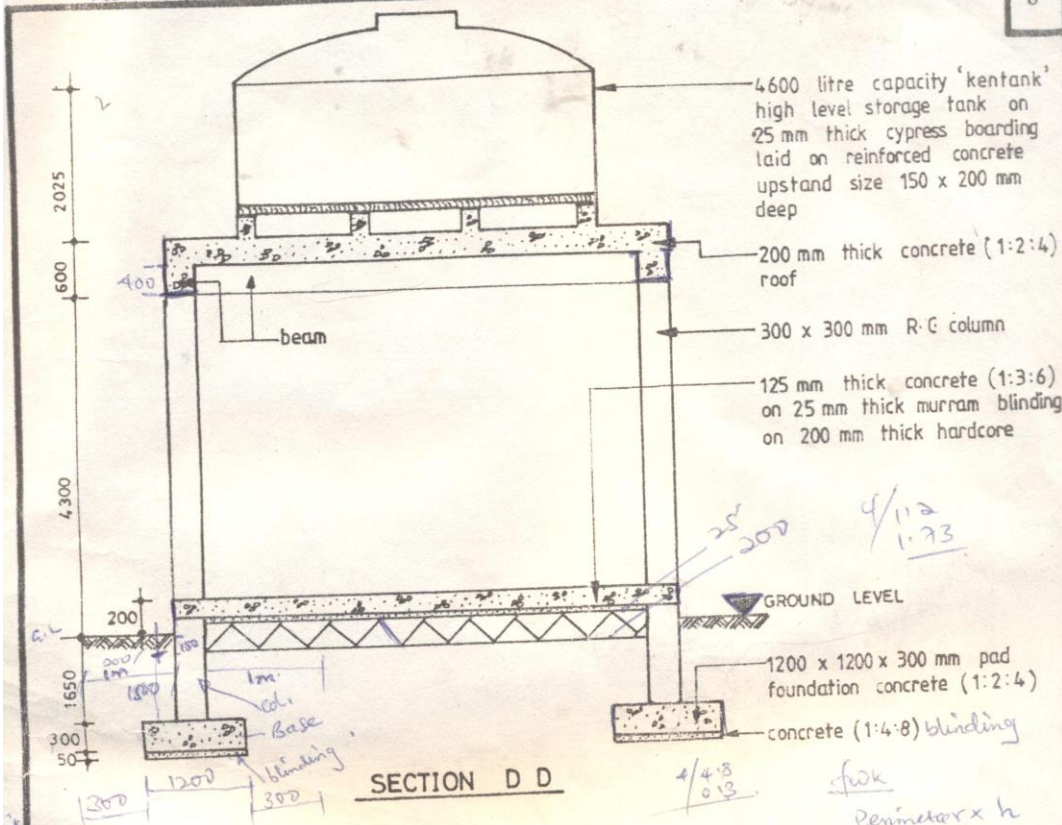
- b) Take off all the quantities for the framed works (superstructure) ONLY shown in the figure below to final fixing of the tank (elevated). (15marks)

Note

- 1) Vegetable soil to be removed from site
- 2) Allow a prime cost sum of ksh 30,000 for the supply of 4600 litre capacity tank by kentank.
- 3) Site is bushy
- 4) Wrot formwork to be used
- 5) Ignore reinforcement

1998

Take-off all quantities for the framed works shown on drawing
No. 04



4600 litre capacity 'kentank'
high level storage tank on
25 mm thick cypress boarding
laid on reinforced concrete
upstand size 150 x 200 mm
deep

200 mm thick concrete (1:2:4)
roof

300 x 300 mm R.C. column

125 mm thick concrete (1:3:6)
on 25 mm thick murrum blinding
on 200 mm thick hardcore

GROUND LEVEL

1200 x 1200 x 300 mm pad
foundation concrete (1:2:4)

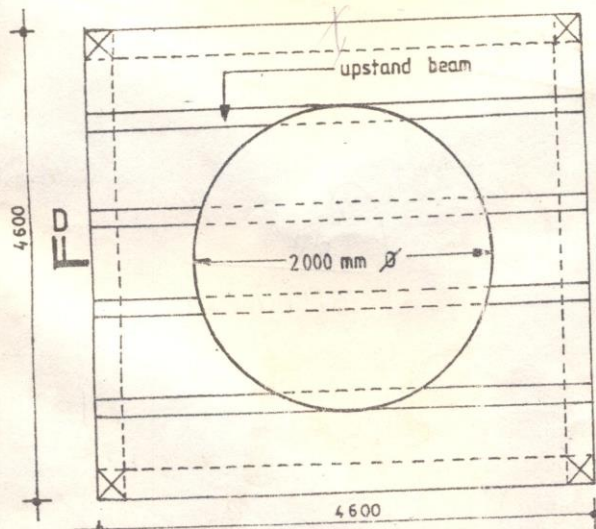
concrete (1:4:8) blinding

25
200
4/112
1.73

4/4.8
0.13

Perimeter x h
= Area

SECTION D D



NOTES:

1. vegetable soil to be removed from site
2. allow a prime cost sum of ksh 30 000 for the supply 4 600 litre capacity tank by 'ken tank'
3. site is bushy
4. wrot formwork to be used
5. ignore reinforcement

$$17.2 = 4.6 - 2(0.3) = 4.0$$

$$2 \times 2 = 16 + 4 \times 0.3$$

$$9.2 \times 2 = 18.4 - 4(0.3) = 17.2$$

$$= 18.4$$

$$400 + 4600 + 300 = 1100$$

$$1100 \times 4 = 4400 \text{ m}$$

ROOF PLAN

Perimeter to Column measured in Sq. m = Perimeter x height

DRG No 02