Total No. of Questions : 8]

SEAT No. :

PC-2356

[Total No. of Pages : 4

[6354]-472

B.E. (Civil)

QUANTITY SURVEYING CONTRACT AND TENDERS

(2019 Pattern) (Semester - VIII) (401012)

Time : 3 Hours] ***[Max. Marks : 70***

Instructions to the candidates:

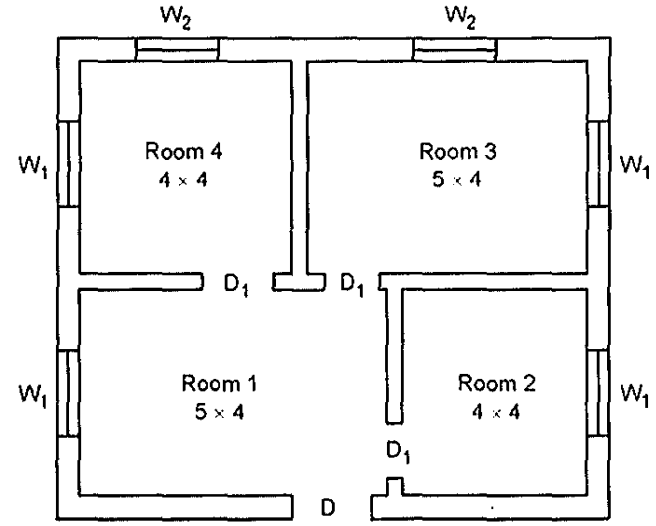
1) ***Attempt Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of electronic pocket calculator is allowed.***
5) ***Assume Suitable data if necessary.***

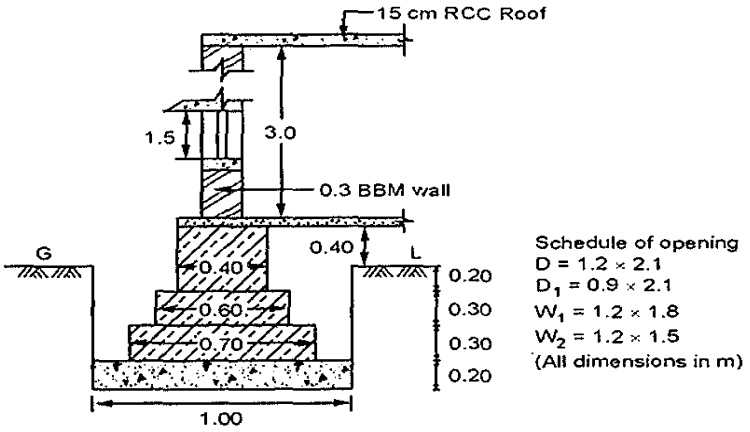
Q1) a) Explain in detail concept of long wall short wall and Centre line method with the help of example. **[8]**

b) Workout the quantity for the following items of work- **[9]**

i) PCC (1:4:8) for foundation

ii) Footing in stone masonry for substructure.





P.T.O.

OR

Q2) a) Prepare bar bending schedule fig show the L s/c and c/s of RCC beam. Also determine the % of steel in the beam (assume density of steel is 7860 kg/m^3) **[8]**

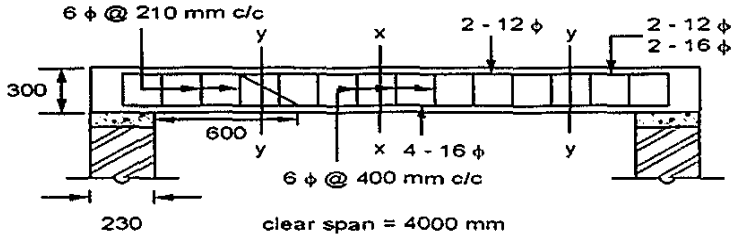


Fig. 21.1(a) : L-Section of Beam

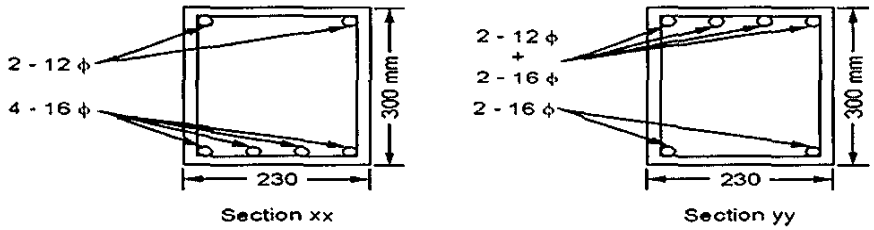


Fig. Q.21.1 (b) : C/S beam

b) Explain in details about factors to be considered during preparation of detailed estimate. **[9]**

Q3) a) Calculate the quantity of earthwork for percolation tank from following data: Use trapezoidal method **[8]**

i) Top width 3m

ii) R.L of top of embankment 102m

iii) side slopes - upstream & downstream side 1:2 (v:h)

iv) refer table

Chainage in M	0	30	60	90	120	150
R.L. of G.L in M	100.50	98.00	95.50	96.00	97.00	99.75

b) Calculate for an embankment by mean area method, workout the quantities of earthwork for an embankment 100m long and 10m wide at a top. Side slope is 2:1 and depth of each 20 m and are 0.6, 1.2, 1.4, 1.6, 1.5m **[9]**

OR

Q4) a) Calculate the quantities of earthwork for 200 m length for a portion of road in an uniform ground, the height of banks at two ends being 1.0m and 1.60m. The formation width is 10 m and side slope 2:1 (H:V). Assume that there is no transverse slope. Use 3 different methods **[9]**

b) Explain different methods to workout quantity of earthwork for Road and canal. **[8]**

Q5) a) Define specification & explain its necessity and enlist types of specification. **[9]**

b) Carryout rate analysis for 2.5 cm thick Cement concrete 1:3:6 flooring **[9]**

The following rates for material and labor may be consider for rate analysis

Cement = Rs. 300 per bag

Sand = Rs. 1400 Per Cum.

Aggregate = Rs. 1400 Per Cum.

Bricks = 4500 per 1000 Nos.

Steel = Rs. 38500 per M.T.

Labour rate Per day

Head mason = Rs. 600

Mason = Rs. 450

Mazdoor = Rs.350

Bhishti = Rs. 300

OR

Q6) a) Using the standard format, conduct the rate analysis for the following item of work Cement concrete 1:2:4 for RCC Roof slab with 1.5% steel **[9]**

b) Write a detailed specification for BBM in CM 1:6 for superstructure. **[9]**

Q7) a) Define valuation. Explain various factors affecting value of property. **[6]**

b) Explain the concept of free hold and lease hold property. What are the reasons under which the property is leased and what are the liabilities of lessor and lease? **[6]**

c) Define : **[6]**

i) Scrap value

ii) Salvage value

iii) Sentimental value

iv) Distressed value

OR

Q8) a) A building is constructed at a cost of 5lakhs. The life of building may be assumed to be 80 years and the scrap value of building to be 10 % of building cost. Determine the depreciation in 40^{th} year. Use straight line method, constant percentage method and sinking fund method assuming 8% compound interest. **[6]**

b) Explain with example : **[6]**

i) Obsolesce

ii) Duel rate Y. P.

iii) Earned Value

c) A plot of land is situated along a highway. The plot has an area of 20,000 sqm with a single frontage of width 40m along highway. The front 30m along the plot from the edge of highway is kept reserved for providing gardening and other green purpose, also the remaining 3 sides of the plot is prohibited from any sort of construction under law. Assuming that the prevailing rate of land varies between Rs. 20/- sqm to Rs.25 sqm. Find the value of the property. **[6]**