Total No. of Questions : 8]

SEAT No. :

PD-5330

[Total No. of Pages : 4

[6404]-68
B.E. (Civil)
QUANTITY SURVEYING, CONTRACTS AND TENDERS
(2019 Pattern) (Semester - VIII) (401012)

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

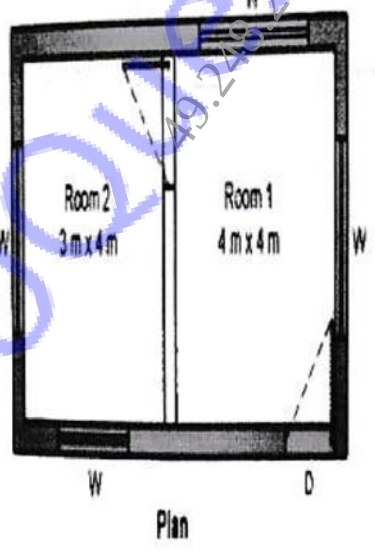
Instructions to the candidates :

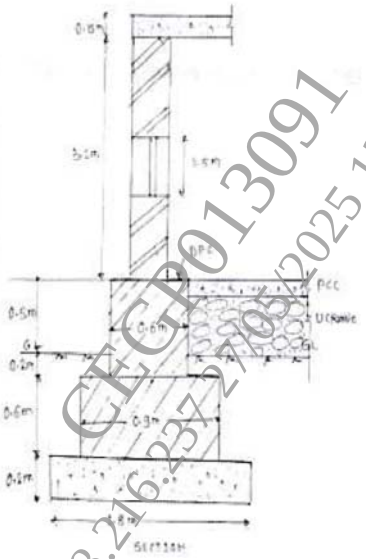
1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of electronic pocket calculator is allowed.***
5) ***Assume suitable data if necessary.***

Q1) a) Describe in detail the concepts of the PWD method and the Centre Line method, using examples for better understanding. **[6]**

b) Figure shows plan and section of residential building, Determine the quantities of following item (PWD method) **[12]**

i) Excavation in Foundation
ii) PCC in Foundation
iii) UCR masonry in CM (1 : 6) in foundation
iv) CR masonry in CM (1 : 6) in foundation
v) Damp proof course 3 cm thick





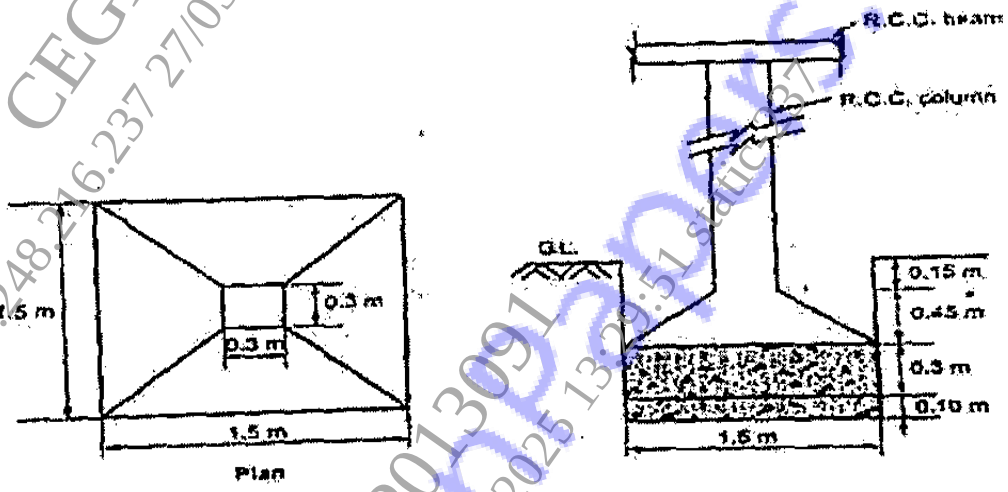
P.T.O.

OR

Q2) a) The plan and elevation for the column footing for an R.C.C. framed structure is shown in Figure work out the quantities for the following item of works. **[10]**

i) Earth work excavation for foundation

ii) Cement Concrete (1:2:4) for column footing



b) Explain the terms **[8]**

i) Bar Bending Schedule

ii) Types of Steel reinforcement

iii) Weight of Steel Bar

iv) Number of Bars or Stirrups

Q3) a) Differentiate between following methods **[8]**

i) Mid sectional area method & Mean Sectional area method.

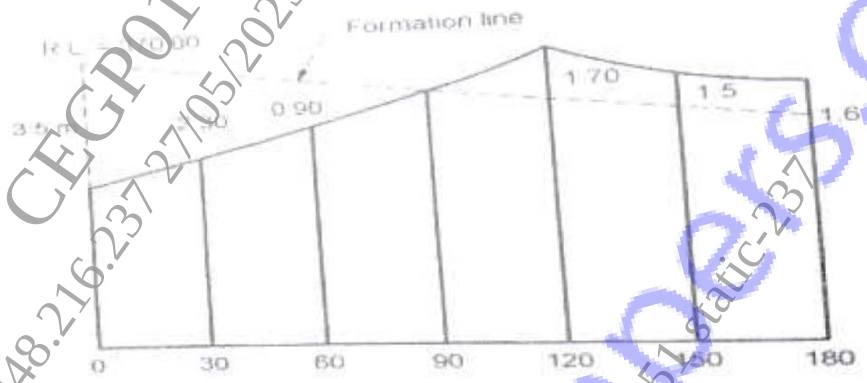
ii) Trapezoidal formula method & Prismoidal formula method.

b) Following fig. shows the levels plotted for a road work. The formation level of a road at starting point is 370. The road surface shall be falling gradient line of 1 to 60. Formation width of a road = 10 m, side slopes 1:2 in embankment and 1.5:1 in cutting. Assume that there is no cross slopes to the ground. **[10]**

i) Calculate the formation level of all points

ii) Calculate the quantity of earthwork in embankment

iii) Calculate the quantity of earthwork in cutting



OR

Q4) a) Explain different method to work out quantity of earthwork for Canal, Railway Embankent & Dam. **[8]**

b) Prepare an estimate of a pipe culvert for following item as shown in Fig. 4(a) and Fig. 4(b) **[10]**

i) Excavation ii) Earth filling iii) Rubble soling

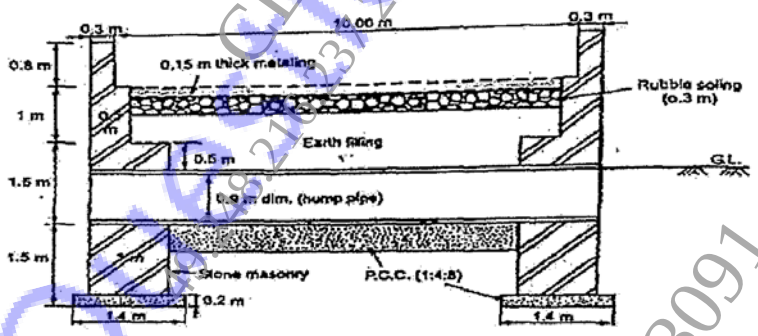


Fig. 4(a)

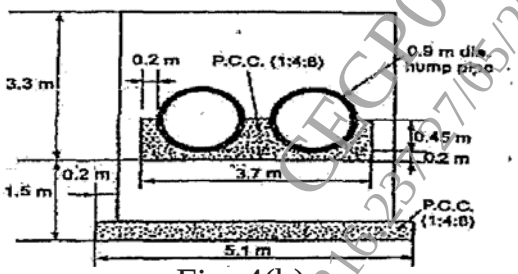


Fig. 4(b)

Q5) a) Using the standard format, conduct the rate analysis for the following item of work. Brickwork in a cement mortar 1:6. (take brick size as 19cm × 9 cm × 9cm) **[9]**

b) Write a detailed specification for RCC work in superstructure. **[8]**

OR

Q6) a) Write a detailed specification for BBM in CM 1:6 for superstructure. **[9]**

b) What is task work? Why does it vary? Explain how the task work is useful in rate analysis of an item. **[8]**

Q7) a) A building is constructed at a cost of ₹ 30,00,000. The estimated useful life of the building is 70 years, and its residual (scrap) value at the end of its life is expected to be 10% of the original cost. Calculate the amount of depreciation for the 40th year using the following methods : **[6]**

i) Straight Line Method

ii) Diminishing Balance Method (Constant Percentage Method)

b) What do depreciation occur in the valuation of property. **[5]**

c) Identify six major factors that impact the assessment of property value, and explain it. **[6]**

OR

Q8) a) The depreciated replacement valu of building has to be found with following details. **[6]**

i) Total built up area = 400 sq-m

ii) Age of building = 20 years

iii) Life of building = 80 years

iv) Scrap value = 10%

v) % of sinking fund = 5%

vi) Assume rate of construction as Rs. 2000/- per sq-m

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 leaser and lease? **[5]**

c) Explain the following terms : **[6]**

i) Belting method of land valuation

ii) Sinking Fund Method