

Total No. of Questions: 8]

SEAT No. :

P6538

[6181]-87

[Total No. of Pages : 5

B.E (Civil)

**QUANTITY SURVEYING CONTRACTS AND TENDERS
(2019 Pattern) (Semester-VIII) (401012)**

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 3) *Figures to the right indicate full marks.*
- 3) *Assume Suitable data in wherever required.*

Q1) a) Fig. 1.a shows plan and section of residential building. Determine the quantities of following item By PWD Method or Center line Method (Assume any suitable data) **[10]**

- 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

b) Explain Different methods of taking out quantities. & Which factors to be considered during preparation of Detailed Estimate. **[8]**

OR

Q2) a) AR.C.C. Simply supported beam of 300 mm X 650mm is reinforced with 4 number of 20 mm diameter bars. The main bars are placed in one row and two bar bent up out of 4. Two top anchor bar of 12 mm diameter are provided and stirrups of 6 mm diameter are provided at 140 mm c/c span over beam of length 5.6m. End bearing is 30 cm. Calculate Quantity of Straight bar, Bent up bar Bar, Anchor Bar, & Stirrups Ref. Fig 2-a **[10]**

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

P.T.O.

Q3) a) Calculate the quantities of Earthwork is cutting and filling for road with following data **[10]**

- i) Formation width of road is 12m
- ii) Slope in cutting 1.5:1
- iii) Slope in Banking 2:1

Chainage	0	30	60	90	120
GL in m	500	498.50	60.70	497	494
FL in m	497	496.50	496	495.5	495

b) List out different methods to workout Earth work quantity for road work. Explain any one method. **[8]**

OR

Q4) a) Calculate the quantities of Earthwork is cutting and filling for road with followind data **[10]**

- i) Formation width of road is 10m
- ii) Formation level of starting chainage is 50.40 m
- iii) Side slope is 1:2 for filling and 1:1.5 in cutting
- iv) The road surface shall be given falling gradient of 1:100

Chainage	0	30	60	90	120	150	180
GL	50.70	50.60	60.60	51.10	51.20	51.00	50.00

b) Differentiate between following methods **[8]**

- i) Mid sectional area method & Mean Sectional area method.
- ii) Trapezoidal formula method & Prismoidal formula method.

Q5) a) What is the necessity of drafting specification for Civil engineering work? Explain briefly **[9]**

- i) General specification
- ii) Detailed specification

b) Prepare a rate analysis of 12mm thick cement plaster (1:4) **[8]**

OR

- Q6)** a) Prepare a detailed Specification for plain cement concrete & Brick Masonry in Superstructure. [9]
- b) What are the factors affecting rate analysis. Explain in details the procedure for rate analysis. [8]
- Q7)** a) What are the different types of value? Explain market value and any 5 factor affecting market value of property. [6]
- b) Explain with example five purpose of valuation. [5]
- c) Determine the present value of a building including land using following data. [6]
- Income available from property: 9600 Rs/ per annum.
 - Life of property: 80 years
 - The rate for redemption is 6% and rate of interest on government securities is 5%.
 - All outgoing: 35% of gross income.
 - Present cost of land: Rs. 30 lakhs.

OR

- Q8)** a) Explain [6]
- Salvage value
 - Book value
 - Fair market value
- b) State four methods of depreciation Explain any one detail. [5]
- c) The depreciated replacement value of building has to be found out with the following data [6]
- Total builtup area = 500m²
 - Age of building = 25 years
 - Life of building = 90 years
 - Scrap value after useful life = 10%
 - Percentage for sinking fund = 5%
- Assume rate of construction as Rs. 2000/sq-m

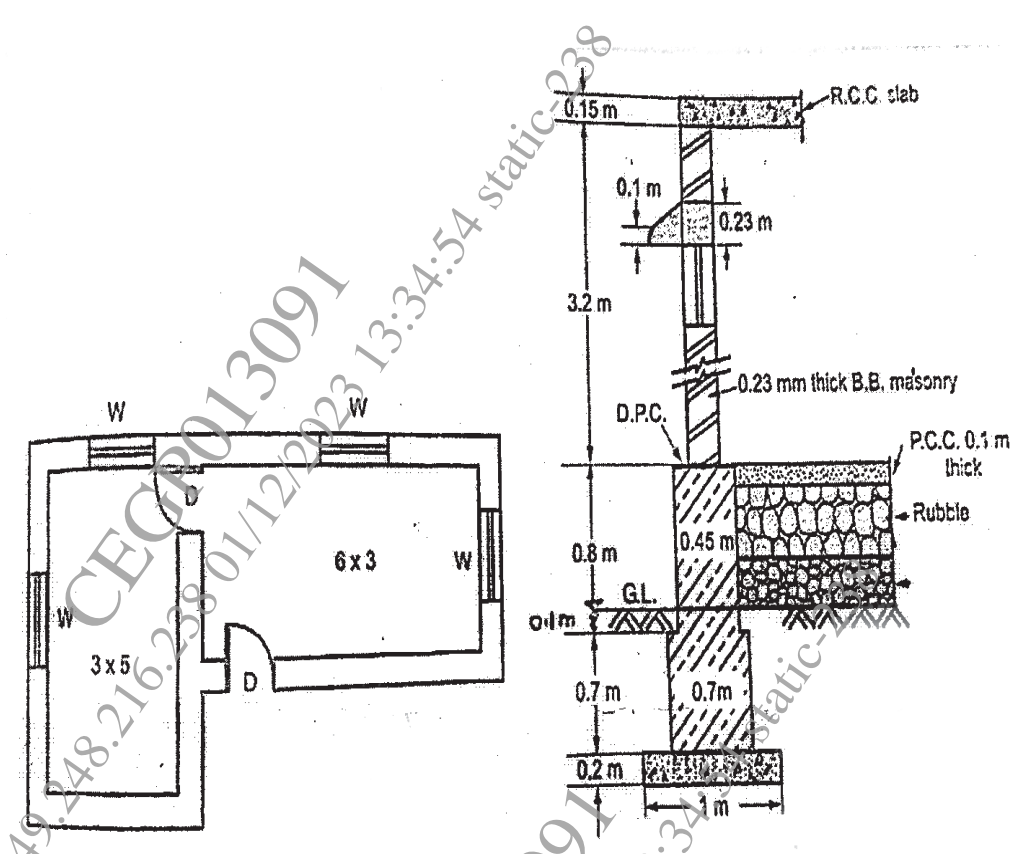


Fig.No. 1-a.

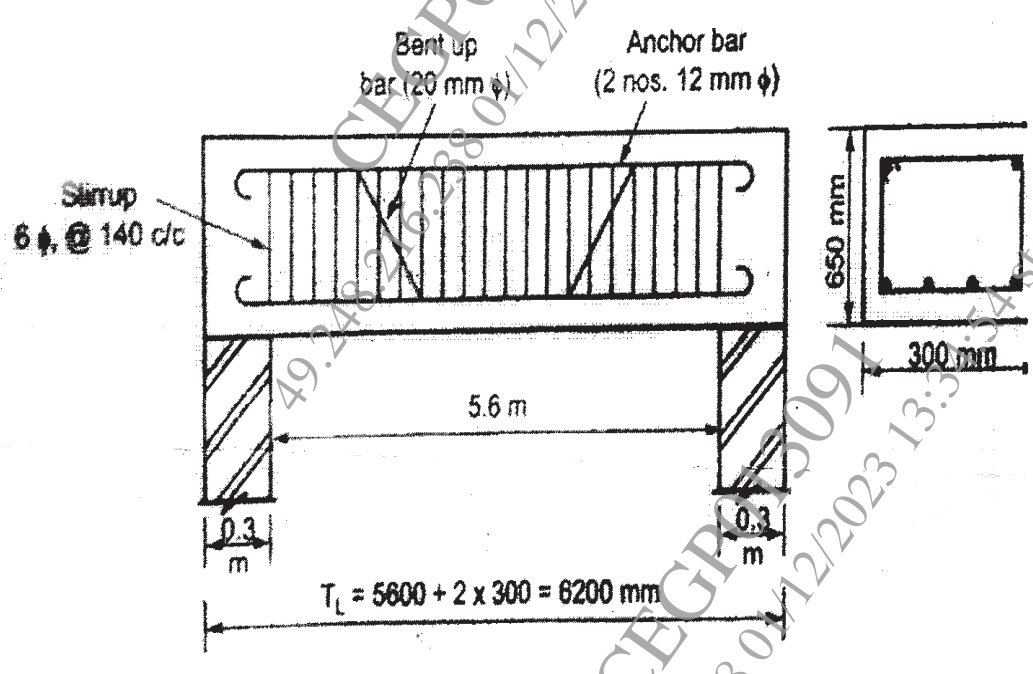


Fig. No. 2.a

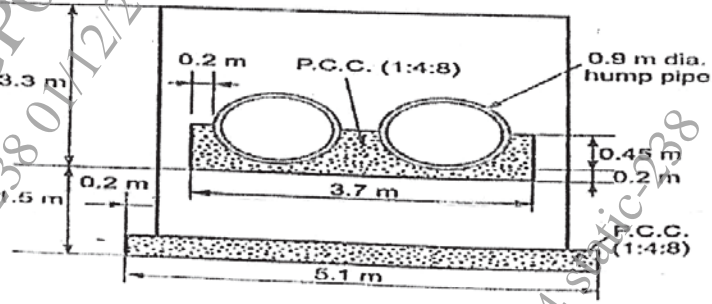
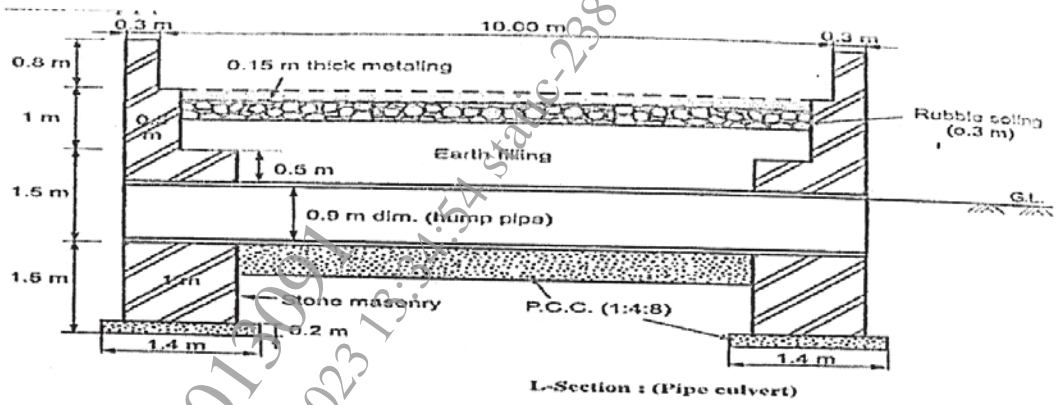


Fig. No 3 a