APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S8 (R, S) / S6 (PT) (R, S) Examination May 2024 (2019 Scheme)

Course Code: CET 402
Course Name: QUANTITY SURVEYING AND VALUATION

Max. Marks: 100   Duration: 3 Hours

PART A
### (Answer two full questions; each question carries 10 marks)

		Marks
1	Explain the detailed specification of the following civil Engineering works (i) First Class brickwork (ii) Reinforced Cement concrete	10
2	Workout the unit rate cement concrete 1:2:4 using	10

Material	Quantity
Stone Ballast 40mm gauge	0.88cum@Rs.1000/cum
Coarse sand	0.44cum@Rs.1600/cum
Cement	0.22cum@Rs.8000/cum
Labours	**Nos**
Mistri	0.03@Rs.1000/Each
Mason	0.2@Rs.800/ Each
Mazdoor	1.2@Rs.500/ Each
Women	2@Rs.400/ Each
Bhisti	0.6@Rs.300/ Each

3	a	Write the unit of measurement of (i) Brickwork in superstructure (ii) DPC using water proofing compound (iii) Pointing of brick wall (iv) Cement concrete in lintels	4
	b	Discuss the factors deciding the rate of items.	6

PART B
((Answer two full questions; each question carries 25 marks)

4	a	Differentiate between Preliminary estimate and Detailed estimate.	5
	b	Prepare a detailed estimate for the following items of work,	20

- Earthwork in foundation
- PCC in foundation
- Brickwork in foundation
- 2cm thick Damp proof course at Plinth level
- Brickwork in super structure in CM 1.6
- 7.5cm thick plain cement concrete flooring

PLAN

SECTION ON A A
D-120 cm × 220 cm
W-100 cm × 150 cm
S-100 cm × 190 cm
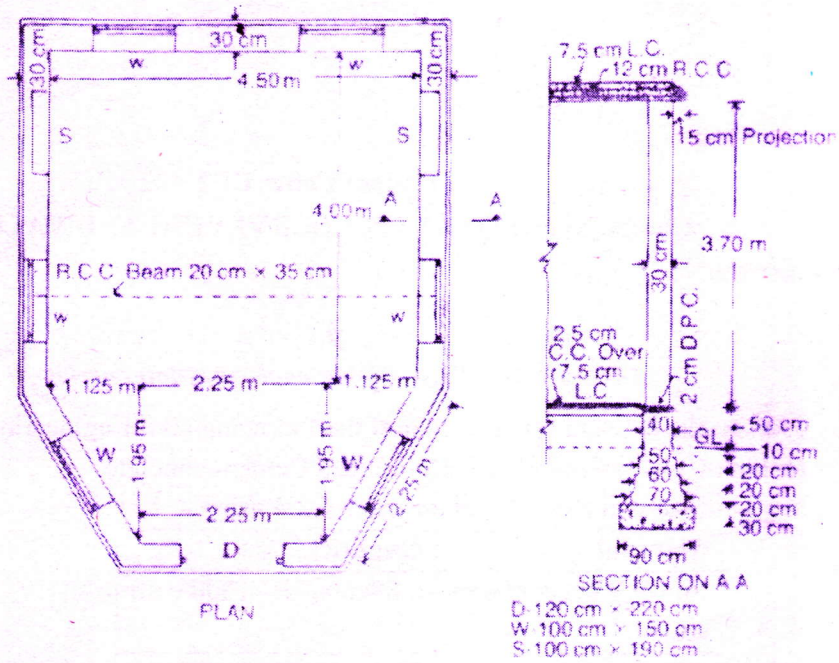
5. Prepare a bar bending schedule for the column and footing shown in Figure-2 and find   25
   out the total quantity of steel reinforcement required. Column Size 40cm × 40cm, Base
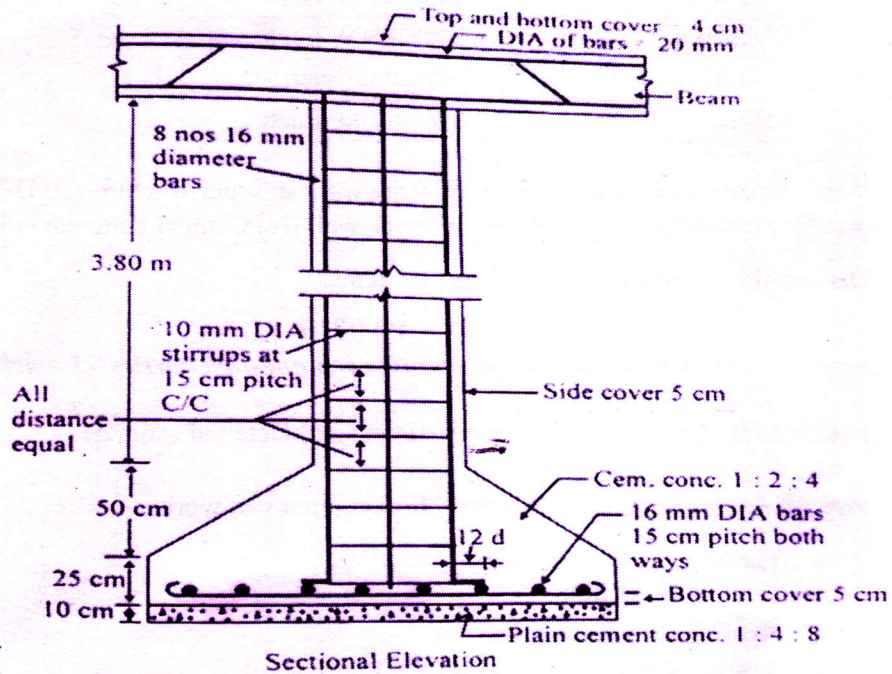   of footing 2.1m × 2.1m.

Figure 2

6   Estimate the quantity of earthwork for a portion of a district road for 400m length with   25
     following data. Formation width, 10m side slopes in banking 2:1, side slope in cutting
     1.5:1, downward gradient is 1 in 200, formation level at chainage 0 is 150.000.

Chainage	0	40	80	120	160	200	240	280	320	360	400
RL	149.0	148.90	148.50	148.80	148.60	148.70	149.20	149.40	149.30	149.0	148.60

PART C

(Answer two full questions, each question carries 15 marks)

7   a   Explain Depreciation and list any three methods for calculating depreciation.   7

     b   Explain any four methods of valuation.   8

8   a   An old building was purchased by a person for Rs.2,00,000. Calculate the co-efficient   7
          of sinking fund, amount of sinking fund and yearly instalment of sinking fund, if the
          future life of the building is 15 years, rate of interest is 5% and scrap value is taken as
          10% of the cost of the purchase.

     b   Differentiate between freehold and lease hold property.   8

9   a   Explain capitalised value and Year of purchase   5

     b   In a plot of land costing Rs.20,000 a building has been newly constructed at a total cost   10
          of Rs.80,000 including sanitary and water supply works, electrical installation, etc. The
          building consists of four flats for four tenants. The owner expects 8% return on the cost
          of construction and 5% return on the cost of land. Calculate the standard rent for each
          flat of the building consisting:
          i) The life of the building as 60 years, and sinking fund will be created on 4% interest
          basis.
          ii) Annual repairs cost at 1% of the cost of construction.
          iii) Other outgoings including taxes at 30% of the net return of the building

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