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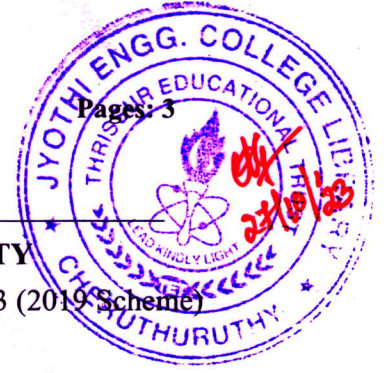
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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Eighth Semester B.Tech Degree Supplementary Examination October 2023 (2019 Scheme)

Course Code: CET402

Course Name: QUANTITY SURVEYING AND VALUATION

Max. Marks: 100　　　　　　　　　　　　　　　　Duration: 3 Hours

PART A
Answer any two full questions, each carries 10 marks.　　　Marks

1　a)　Explain the detailed specifications for earthwork excavation in foundation　(5)

　　b)　Write the units of measurement for the following:　(5)

　　　　i. Brick work

　　　　ii. Flooring

　　　　iii. Earthwork

　　　　iv. Skirting

　　　　v. Cement Plaster

2　a)　Mention any 6 purposes of estimate.　(6)

　　b)　Explain the terms Centage Charge and Prime Cost　(4)

3　a)　Prepare the analysis of rate for 1 m³ of RCC of mix of ratio 1:3:6　(10)
　　　　with following data as per DAR- 20 mm Stone aggregate-0.70/m3
　　　　@Rs.1350, 10 mm Stone aggregate-0.24/m3 @Rs.1350, Carriage of stone
　　　　aggregate belowe 40 mm 0.94/m3 @Rs.103.77, Coarse Sand (zone III)
　　　　0.47/m3 @ Rs.1350, Carriage of Coarse sand 0.47/m3 @103.77, Portland
　　　　Cement 0.22/tonne @Rs. 4940, Carriage of cement 0.22/tonne @Rs.92.24,
　　　　Mason 0.10/dy @Rs.709, Beldar 1.63/day @558, Bhisthi 0.70/day @617,
　　　　Hire charges for concrete mixer 0.07/day @Rs.800, Vibrator 0.07/day @
　　　　Rs.370, Sundries 13.52/L.S @ Rs.2.

PART B
Answer any two full questions, each carries 25 marks.

4　a)　Prepare a detailed estimate for earthwork for a portion of a road from the　(25)
　　　　following data:

Dist. in m	0	100	200	300	400	500	600	700	800	900	1000	1100	1200
R.L. of ground	114.50	114.75	115.25	115.20	116.10	116.85	118.00	118.25	118.10	117.80	117.75	117.90	119.50
R.L. of formation	115 at zero- upward gradient 1 in 200 upto 600 m and afterwards downward gradient 1 in 400												

Formation width of road is 10 metre side slope 2: 1 in banking and 14:1 in cutting. Adopt suitable rates.

5 a) The figure shows details of a residential building. Calculate the quantities (25) and costs of the following items. (Longwall- Short wall Method)

      i)   Earthwork excavation for foundation (Rate Rs.85/m^3)

      ii)   P C C (1:4:8) for foundation (Rate Rs.3200/m^3)

      iii)   Brick masonry up to plinth level (Rate Rs.3200/m^3)

      iv)   Brick masonry above plinth level (Rate Rs.3500/m^3)

      v)   Smooth plaster inside the rooms and ceiling. (Rate Rs.150/m^2)
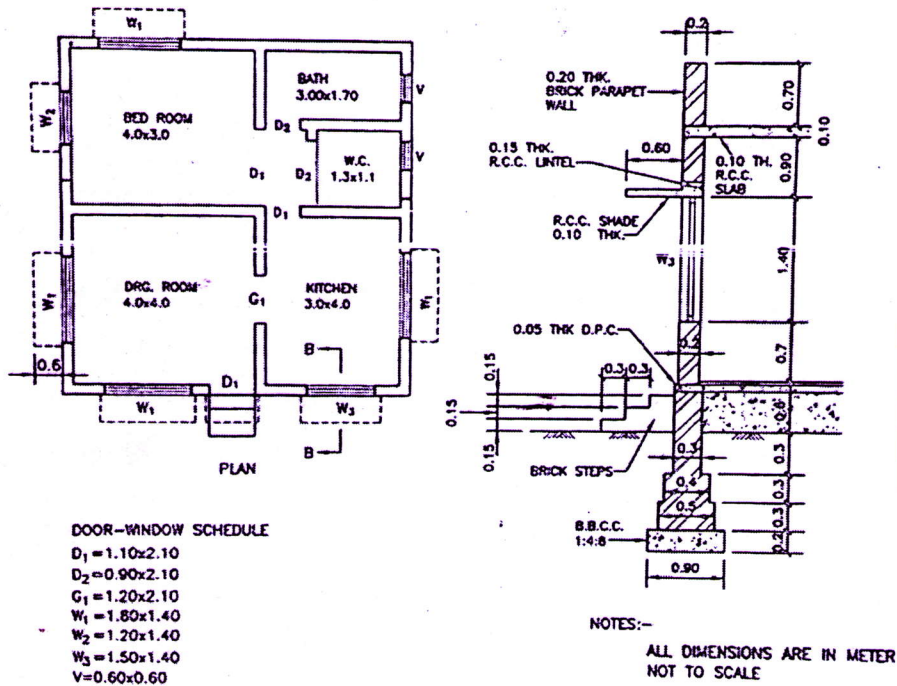
6 a) Prepare the Bar Bending schedule of the RCC beam shown below. (25)

Section AA
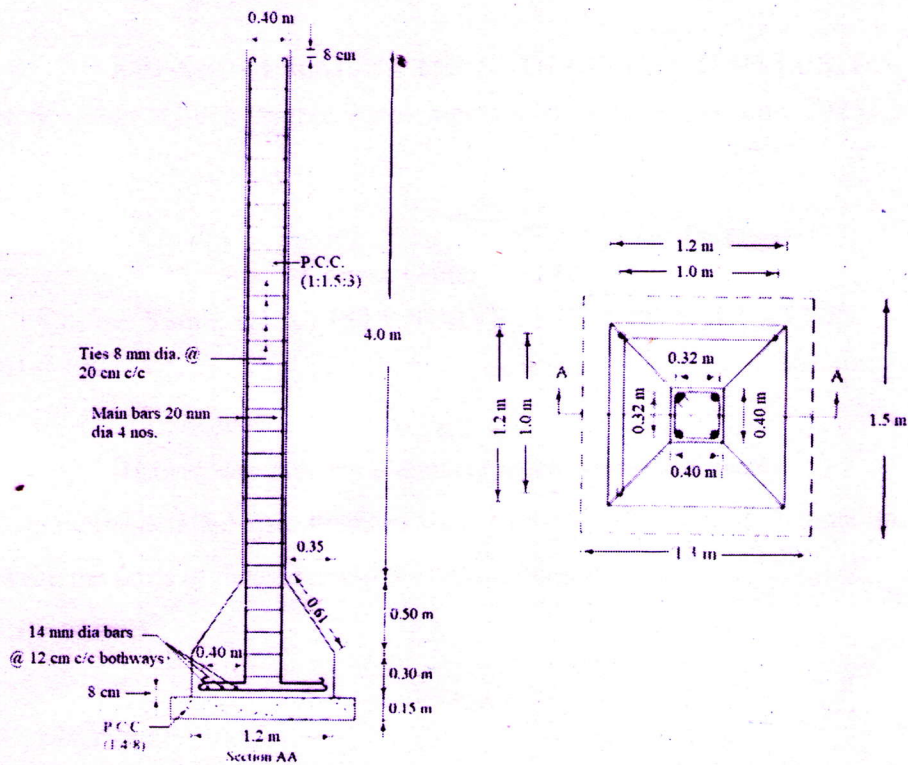
PART C
Answer any two full questions, each carries 15 marks.

7 a) Define Depreciation and explain any three methods of calculating depreciation. (15)

8 a) Differentiate Depreciation and Obsolescence (9)

   b) Differentiate between Market Value and Book Value (6)

9 a) A transformer costs Rs 250000 and has a useful life of 30 years. If the scrap value of the transformer is 20000 and the rate of annual compound interest is 6.5%. Then, calculate the amount to be saved annually for the replacement of the transformer after the end of 30 years (6)

   b) Explain any 3 methods of valuation (9)

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