CV701

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M S RAMAIAH INSTITUTE OF TECHNOLOGY

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE – 560 054

SEMESTER END EXAMINATIONS – January 2013

Course & Branch	:	**B.E.- Civil Engineering**	**Semester**	:	**VII**
Subject	:	**Estimation and Costing**	**Max. Marks**	:	**100**
Subject Code	:	**CV701**	**Duration**	:	**3 Hrs**

Instructions to the Candidates:

- Part A is Compulsory and Answer any Three Questions from Part B.
- Assume missing Data Suitably and Mention

PART – A

1. The details of a residential building are shown in fig 1. Work out the quantities and cost of the following items of work by centre line method.

   a. Calculate the centre line and No. of Junction (05)
   b. Earthwork excavation for all foundation at Rs. 200.00 per m^3 (07)
   c. SSM in CM 1:6 for foundation at Rs. 3500.00 per m^3 (09)
   d. BBM in CM 1:6 for Super structure at Rs. 4500.00 per m^3 and (11)
      Rs. 1000 per m^2 (09)
   e. RCC works at Rs. 6000.00 per m^3 (09)
   f. Internal and Ceiling Plaster in CM 1:4 at Rs. 100.00 per m^2
   g. Abstract (05)

PART - B

2. An RC beam with a clear span 10m has its cross section at the middle of the beam – 2 #16Ø at top and 5 #20Ø at bottom. The shear reinforcements using 2L#10@150c/c up to the quarter span from both supports and the spacing is doubled at the remaining portion. The overall size of the beam is 300mm×600mm. Assume the clear cover as 25mm and thickness of the bearing as 300mm. Calculate the quantities. (15)

3. Work out from first principles the rate per unit of the following (15)

   a. 12mm thick ceiling Plaster in CM 1:4

   b. 25mm thick CC flooring of M20 grade

   c. Brick masonry in CM 1:6 in super structure

4. Write the specification for the following (15)

   a. Damp Proof course (1:3:6)

   b. Coursed rubble stone masonry in CM 1:8

   c. RCC roof concrete of M20 grade

5. Write short notes: (15)

   a. Technical Sanction

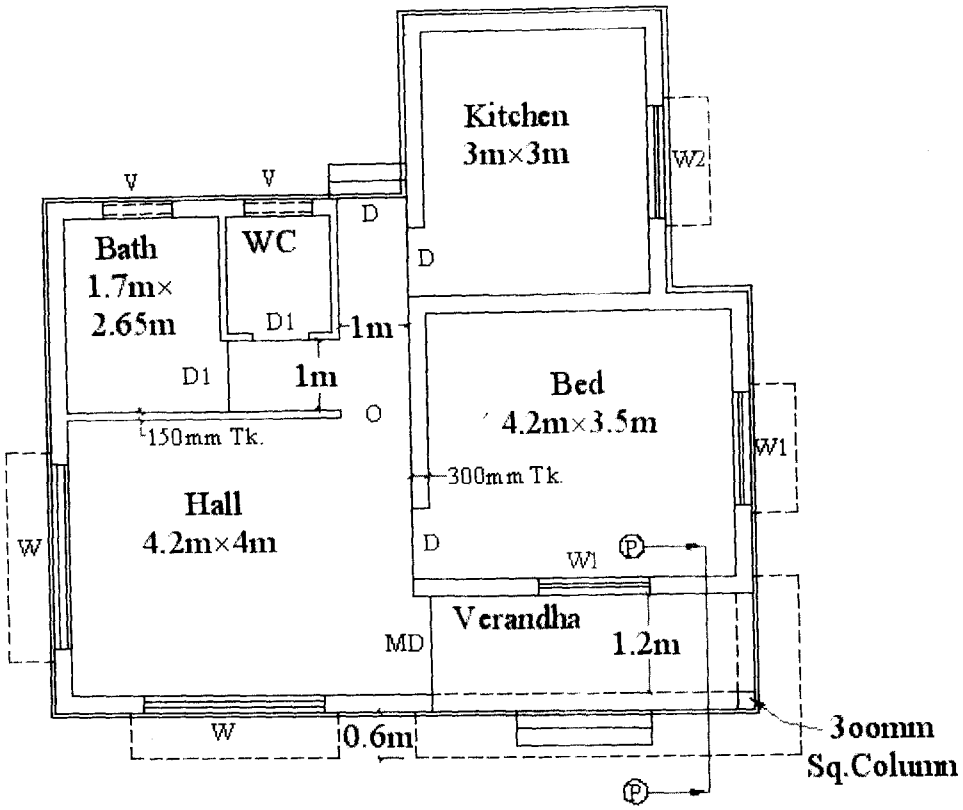
   b. Measurement Book

   c. Security Deposit

6. Estimate the quantity of earthwork for a road of 12.0m formation width with the following data using mean sectional method. Side slope is 2:1(H:V). (15)

Chain age(m)	0	30	60	90	120	150	180
GL	81.5	80.3	82.4	85.0	86.1	84.5	83.1
FL	79.0	Rising Gradient 1 in 300					

Chain age(m)	210	240	270	300
GL	82.7	80.6	78.25	76.1
FL	Rising Gradient 1 in 300			



Schedule

MD- 1.2×2.1m
D -0.9×2.1m
D1 -0.75×2.1m
W -2×1.8m
W1 -1.5×1.35m
W2 -1.5×0.75m
V -0.9×0.6m
O -1×2.1m

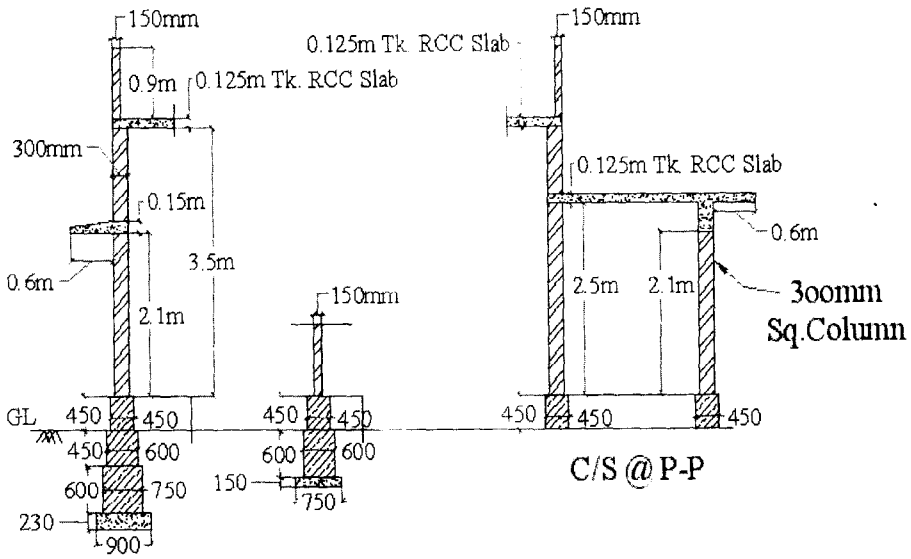


Fig 1

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