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MAKE UP CV701

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M S RAMAIAH INSTITUTE OF TECHNOLOGY

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE – 560 054

MAKE UP EXAMINATIONS – FEBRUARY 2012

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

Instructions to the Candidates:

- Answer Question No.1 and any THREE of the remaining.
- Missing data, if any may be suitably assumed.

UNIT - I

1. The accompanying sketch shows the details of residential building (Fig.1). Workout the quantities and cost of the following items of work.
   a) Earthwork excavation for foundation in ordinary soil @ Rs.175 per Cu.m (05)
   b) C.C (1:4:8) bed for formation @ Rs.2000 per Cu.m (05)
   c) Size stone masony is CM(1:6) for footing and basement @ Rs.1500 per Cu.m (10)
   d) BBM in supustructure with CM(1:6) @ 2250 per Cu.m (15)
   e) Cement plastering in CM(1:6) @ Rs.160 per Sq.m (10)
   f) Calculations, center lines and junctions (10)

2. Following table gives R.L. for a portion of 400m length of road having road width=10m, side slope (2:1) in filling (H:V), and (1.5:1) in cutting. (15)

Distance (m)	0	40	80	120	160	200	240	280	320	360	400
R.L. of Ground (m)	31.0	30.9	30.5	30.8	30.6	30.7	31.2	31.4	31.3	31.0	30.6
R.L. of Formation (m)	32.0	← Down Gradient 1 in 100 →									

Compute the quantity of earth work and prepare the cost of earth work at prevailing rate for filling=Rs.200 per Cu.m and cutting=Rs.175 per Cu.m

3. Write detailed specifications for the following (5x3=15)
   a) Cement plastering in CM(1:4) with lime rendering
   b) R.C.C. slab roofing with M20 Grade
   c) Brick Masonry in CM(1:6) for superstructure

4. The longitudinal section and cross section of a R.C.C. beam is shown in Fig.2. Calculate the quantity of steel required for a beam. Given the diameterwise weight of rod in kg/m. Clear cover to reinforcement is 20mm. (15)

8mm – 0.4kg/m 20mm – 2.5kg/m
10mm – 0.6kg/m 25mm -3.8kg/m
16mm – 1.6kg/m

5. From the first principles analyse the rate per unit quantity for the below mentioned items of work. (5x3=15)

a) R.C.C. roofing of 150mm thick slab of (1:1½:3) with 1% steel reinforcement.
b) Brick Masonry I CM (1:6) for walls.
c) Cement plastering in CM(1:4) for walls.

6. Explain briefly the following (5x3=15)

a) Importance of Measurement book
b) Tender and notifications
c) Contract terms and conditions.

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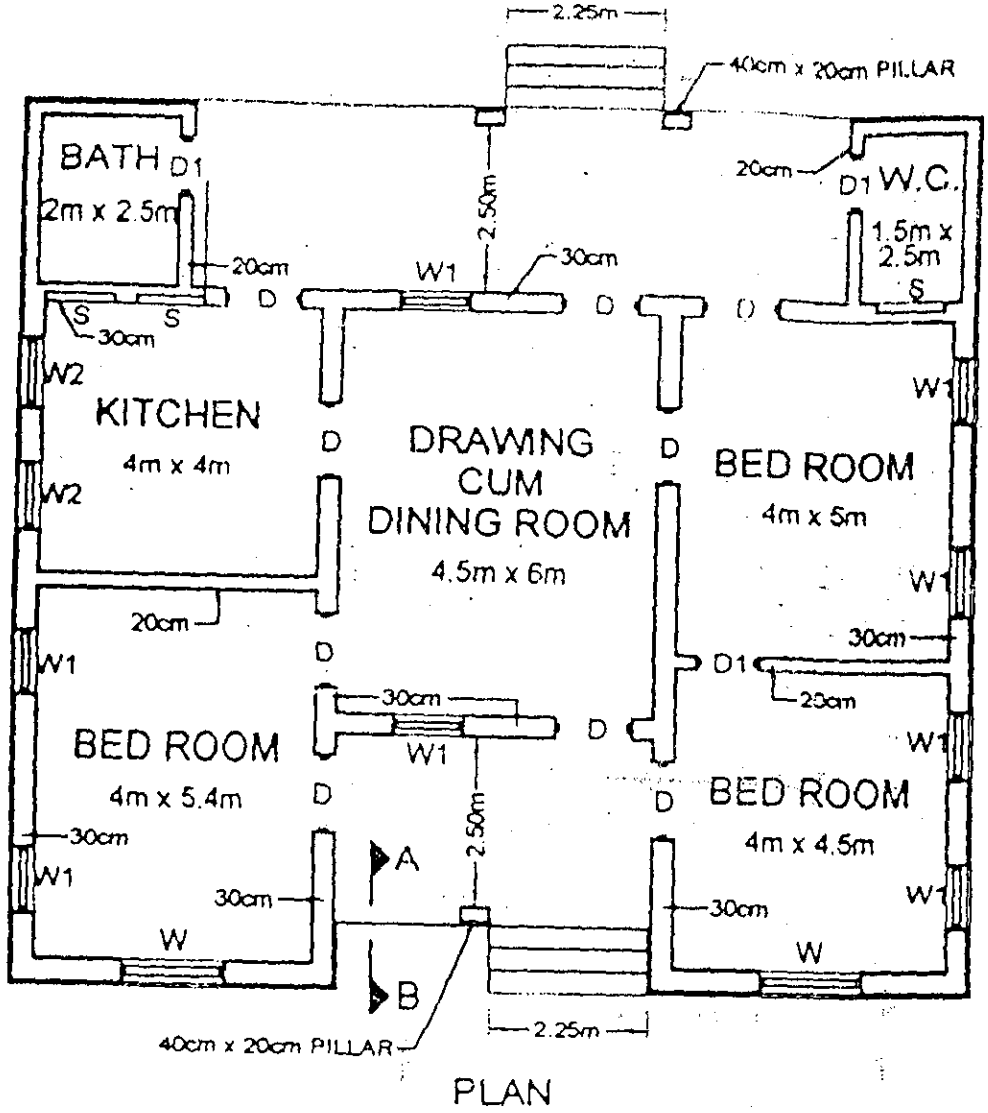
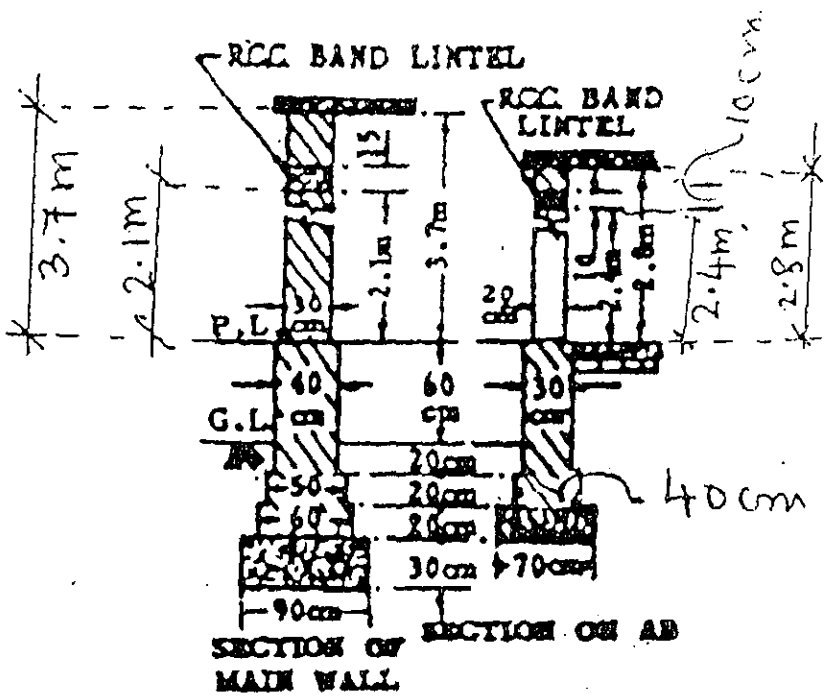




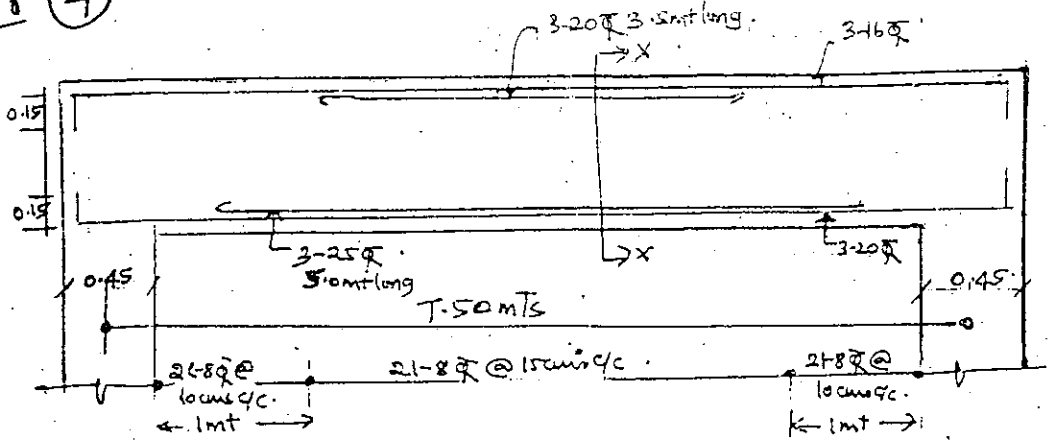
Schedule

DOOR	:	D	= 1.1m x 2.1m
		D_1	= 0.9m x 2.1m
SHELF	:	S	= 1.0m x 1.5m
WINDOW	:	W	= 1.5m x 1.5m
		W_1	= 1.0m x 1.5m
		W_2	= 1.0m x 1.0m

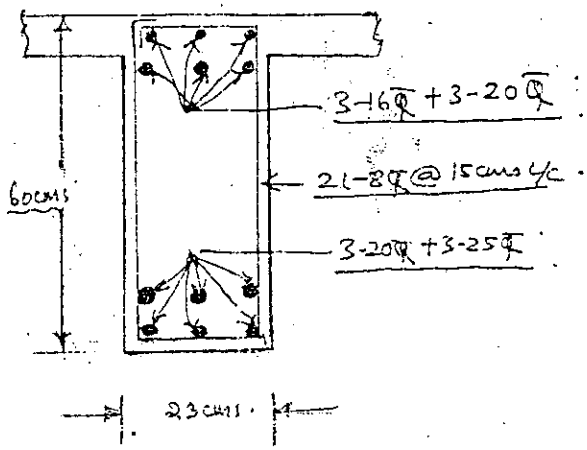
FIG-1

Q. No (1)

Q. No (4)



L-S. OF BEAM. 23cm x 60cm.



c/s at X-X.

Fig (2)
Q-no (4)

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