CV702

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M S RAMAIAH INSTITUTE OF TECHNOLOGY

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE – 560 054

SEMESTER END EXAMINATIONS – JANUARY 2016

Course & Branch : B.E.- Civil Engineering | **Semester : VII**

Subject : Estimation and Costing | **Max. Marks : 100**

Subject Code : CV702 | **Duration : 3 Hrs**

Instructions to the Candidates:

- *Answer Question Number 1 (Compulsory) from UNIT-I and three from the UNIT-II*
- Assume the missing data suitably.

UNIT-I

1. Prepare the detailed estimate and abstract estimate for items of the following for the residential building shown in the figure (1). CO1 & CO2 (55)

   i)Cement concrete bed 1:3:6 for foundation@ Rs 2500/cum
   ii) Second class brick masonry in cm 1:6 for superstructure including parapet @ 2000/cum
   iii)R.C.C roofing 15cm thick 1:2:4 cement concrete proportion @ 6000/cum
   iv) plastering with c.m 1:6 for inside walls and ceiling @150/sqm

UNIT-II

2. Work out the quantities of a septic tank shown in figure (2) and details of items of work given below: CO3 (15)
   i) Earth work is excavated in hard soil
   ii) Foundation bed concrete and floor concrete with cc 1:3:6
   iii) Roof covering slab and baffle wall with precast RCC slab
   iv) 1st class brick masonry in c.m 1:4
   v) Plastering with c.m 1:4for inside with water proof compound
   vi) 20mm cement plaster for flooring in c.m 1:3

3. Workout from the first principles the rate per unit of the following CO4 (15)
   a) Lime concrete in foundation with 40mm gauge stone Ballast, white lime and sand (proportion 1:2:4)unit 1 cu.m. Take-10 cum
   b) 1st class brick work in foundation and plinth with 20x10x10 cm(nominal size) Bricks with cement sand mortar 1:6- unit 1 cu.m. Take 10 cu.m
   c) Wood work using Teak wood for fully panelled doors

4. Estimate the quantity of earth work for a proportion of road for 300m length from the following data. Formation width is 10m, side slopes in banking is 2:1 and side slopes in cutting is 1.5:1. CO4 (15)

Distance	0	30	60	90	120	150	180	210	240	270
RL of ground	101	100.9	100.5	100.7	100.8	100.6	100	99.8	99.2	99.1

The formation level at the first chainage is 102.0. The road is in downward gradient of 1 in 150 upto distance of 120m. Afterward gradient changes to 1 in 100.

5. Write down the specifications of the following items of works CO5 (15)

a) 1st class brick work.

b) Reinforced cement concrete.

c) Painting works

6. Write short notes on, CO5 (15)

a) Contract and tender b) earnest money and security deposit.

c) stores

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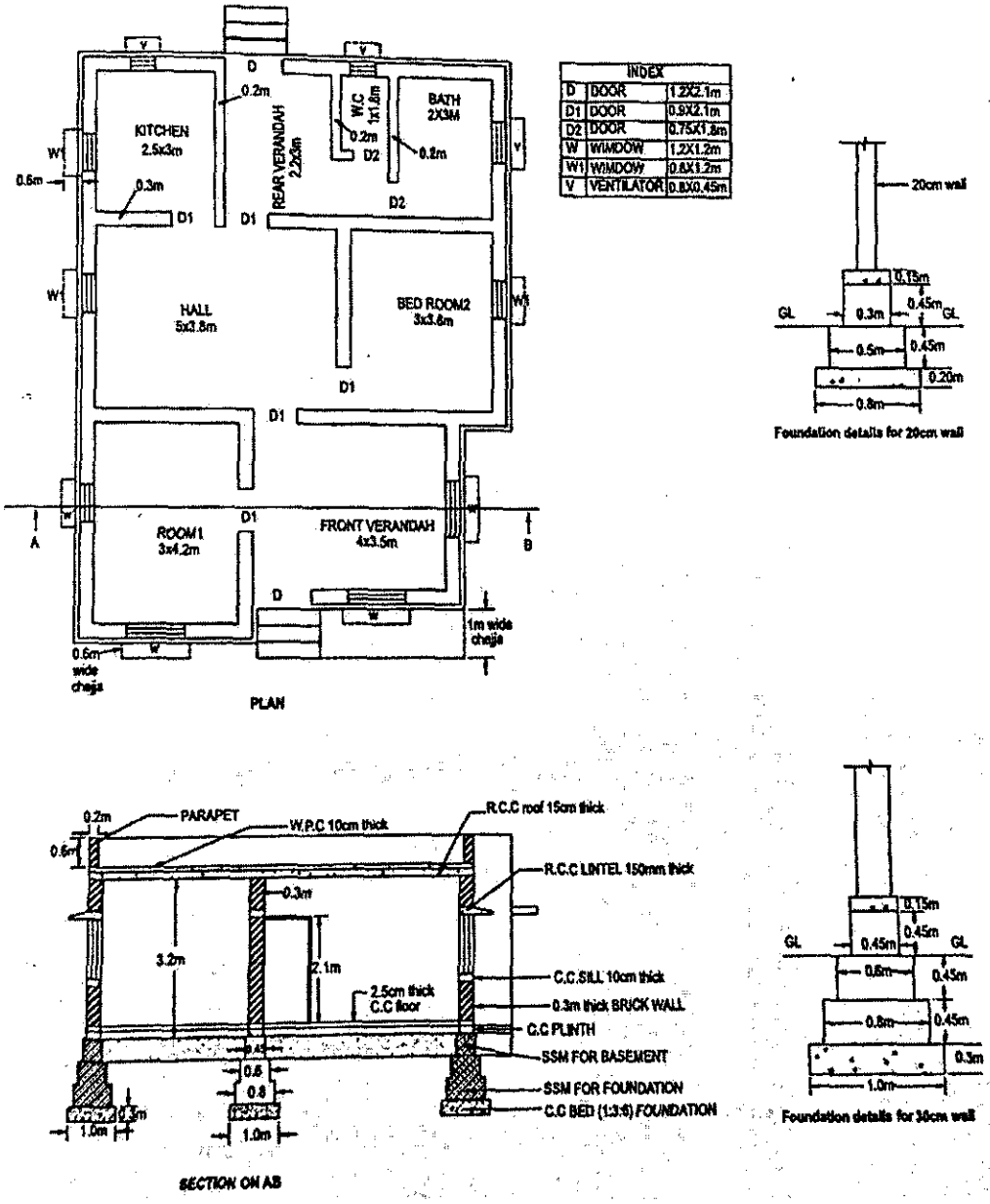

Figure 1

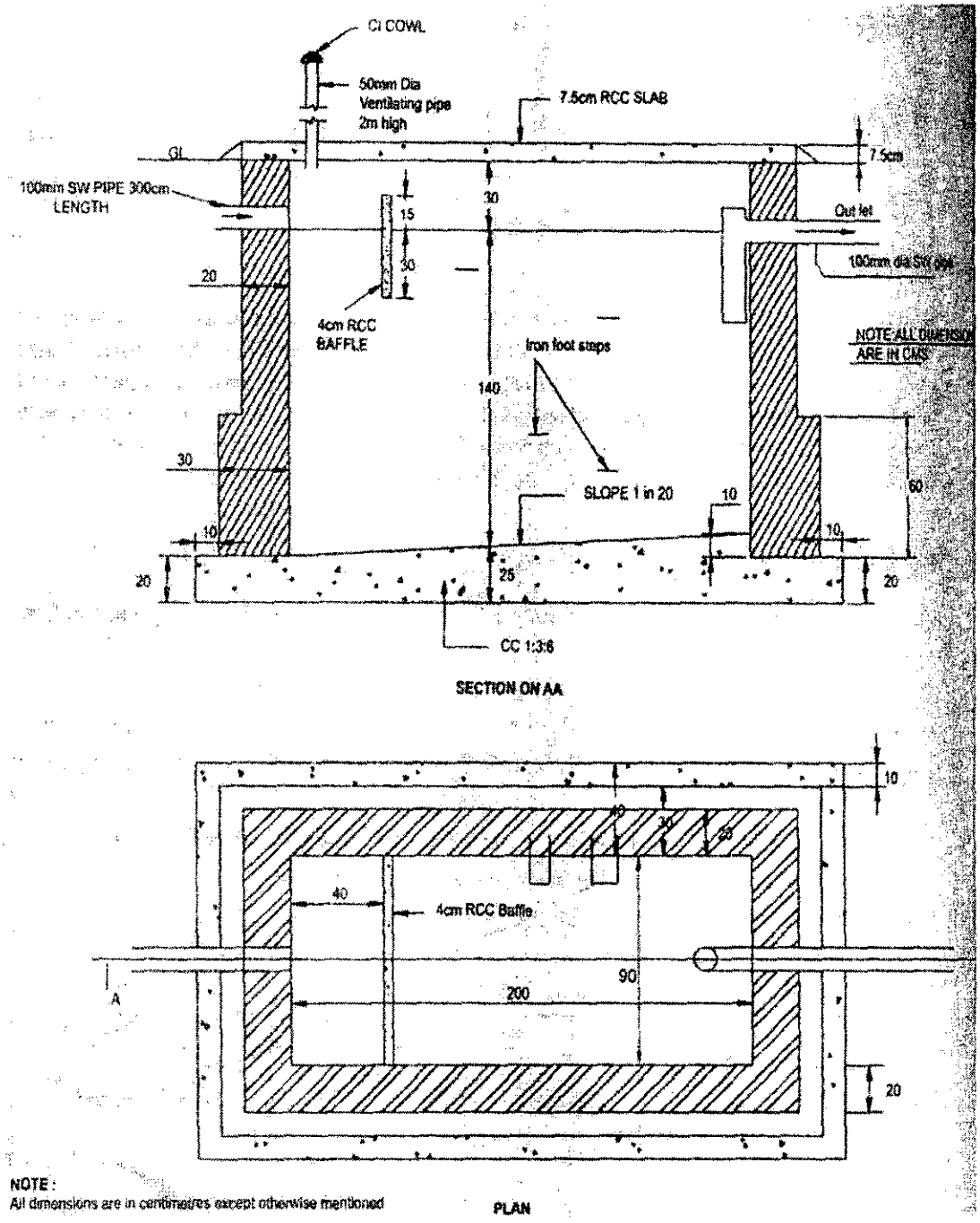
CI COWL
50mm Dia
Ventilating pipe
2m high
7.5cm RCC SLAB
GL
7.5cm
100mm SW PIPE 300cm
LENGTH
15
30
30
20
Out let
100mm dia SW pipe
4cm RCC
BAFFLE
Iron foot steps
NOTE ALL DIMENSION
ARE IN CMS
140
30
SLOPE 1 in 20
10
60
10
10
20
25
20
CC 1:3:6
SECTION ON AA
10
40
30
20
40
4cm RCC Baffle
A
90
200
20
NOTE :
All dimensions are in centimetres except otherwise mentioned
PLAN

Figure 2