1027

Code : 15CE53T

Register Number | | | | | | | | | | |

V Semester Diploma Examination, Oct./Nov.-2019

ESTIMATION & COSTING

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer **all** Parts.

(ii) Missing data may be assumed suitably.

(iii) Assume suitable rates.

PART – A

Answer any **one** from the following :

1. (a) What is an estimate ? List the types of estimate. Explain any one of them. **10**

   (b) Differentiate between preliminary estimate and detailed estimate. **10**

2. Write the detailed specification for any **one** of the following [(a) or (b)].

   (a) (i) Plastering in cement mortar 1 : 6. **5**

   (ii) Distempering for internal wall two coats. **5**

   (b) (i) Define : 1. General specification.

   2. Detailed specification **5**

   (ii) Cement concrete 1 : 2 : 4 for Damp proof course. **5**

3. Prepare Rate Analysis for any **one** of the following [(a) or (b)].

   (a) Cement concrete in foundation 1 : 2 : 4. **10**

   (b) R.C.C. for slab 1 : 15 : 3 including centering and shuttering laid in positon with 90 kg/cum steel. complete in all. **10**

PART – B

4. Prepare a detailed and abstract estimate for the following items of the plan of building as shown in Fig. 1 by CENTRE LINE METHOD. (any five item).

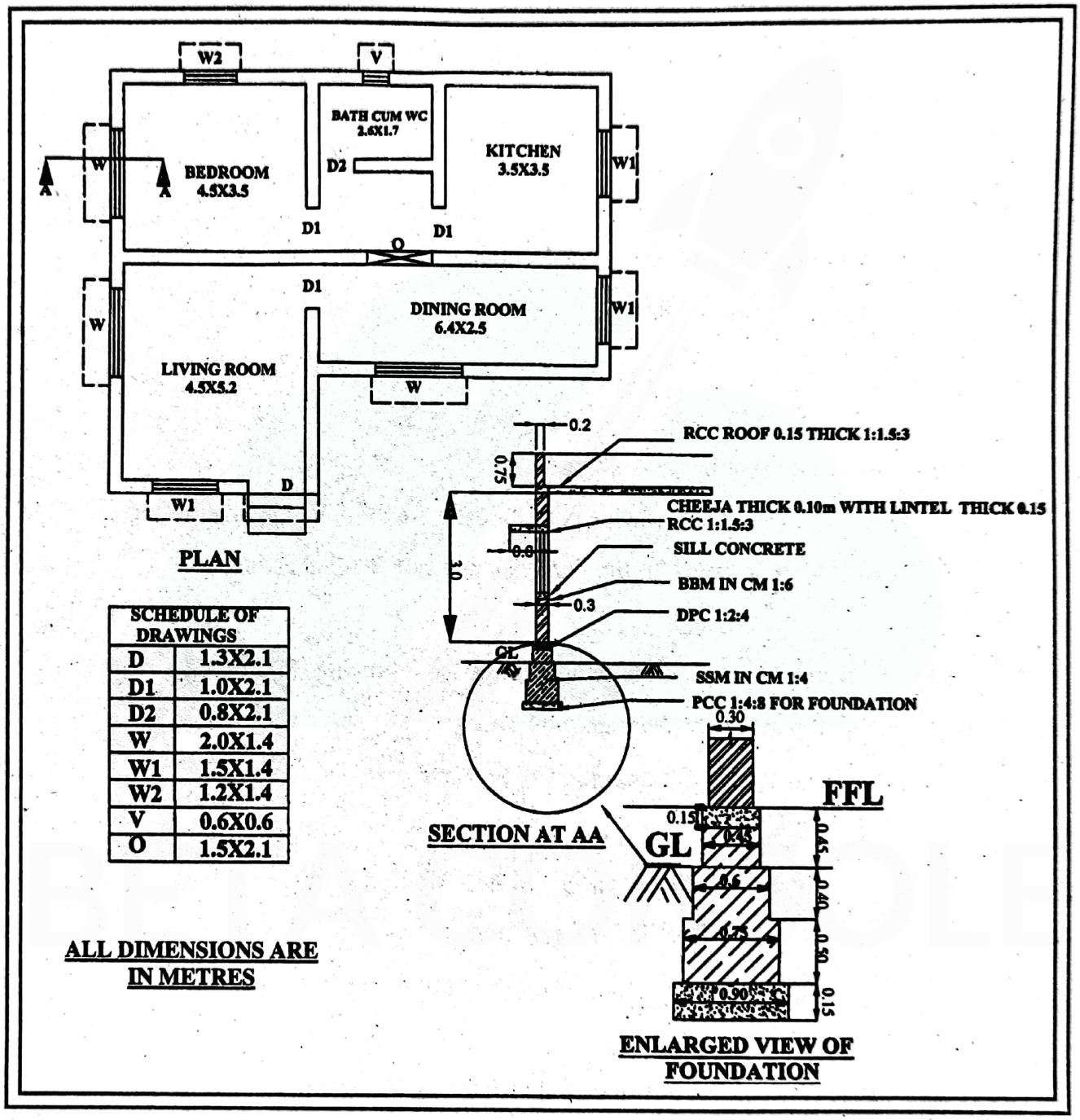

Fig. 1

(i) CC bed 1 : 4 : 8 for foundation @ ₹ 3,800/m^3. **10**

(ii) Burnt Brick Masonry (BBM) in cm 1 : 6 for super structure excluding parapet wall @ ₹ 4,700/m^3. **10**

(iii) R.C.C. 1 : 1.5 : 3 for slab, lintex and chejja including centering shuttering laid in position @ ₹ 5,200/m^3. **10**

(iv) Plastering with CM 1 : 6 for inside walls excluding ceiling plastering @ ₹ 160/m^2. **10**

(v) Enamel painting for Doors (fully panelled) windows (partly panalled and partly glazed) and ventilators (fully glazed) @ ₹ 110/m^2. **10**

(vi) Plastering with CM 1 : 6 for outside walls including Parapet and Chejja @ ₹ 140/m^2. **10**

(vii) Vitrified floor tiles of size 60 cm × 60 cm laid on 20 mm thick Cement Mortar 1 : 4 @ ₹ 1200/m^2. **10**

PART – C

5. Prepare a detailed estimate for the following items of work for the construction of tar road for state highway 275 km from the following details :

(i) Two laned with island park.

(ii) Formation width – 18.00 m.

(iii) Average height and bank – 1.20 m.

(iv) Side slope – 2 : 1.

(v) Metalled width on either side of island for roadway – 4.0 m on each lane.

(vi) Soling coat for roadway and island - 9.80 m wide 200 mm thick.

(vii) Intercoat on each lane – 4.0 m wide 15 cm compacted thickness.

(viii) Top coat on each lane – 4.0 m wide, 15 cm compacted thickness.

(ix) 15 cm × 60 cm granite side walls for island.

(x) Filling island with fertilized soil 60 cm thick.

(xi) Surface is finished with two coats bituminous painting to each lane.

Items of work to be estimated are : **20**

(a) Earth work in banking.

(b) Soiling coat of boulder.

(c) Intercoat of stone ballast 60 mm and down size.

(d) Top coat of stone ballast 40 mm and down size.

(e) Painting first coat with road for No. 3.

Note : (1) Take 20 mm gauge stone grit @ 1.35 m^3 %m^2.

(2) Binding tar @ 220 kg % m^2.

(f) Painting second coat with asphalt

Note : (1) Take 12 mm gauge stone grit @ 0.75 m^3 % m^2.

(2) Bitumen @ 120 kg % m^2.

(g) 15 cm × 60 cm granite stone side wall (kerb) to island park.

OR

Determine the quantities of earth work for the portion of a road between chainages 0 to 10 from the following data, lengths being measured with standard 20 m chain.

Chainages	0	1	2	3	4	5	6	7	8	9
R.L. of Ground	231.1	231.2	230.9	231.2	230.8	230.7	230.6	230.4	229.1	229.5

The formation level @ 0 chainage is 230.0 and the road is in rising gradient of 1 in 200. The width of formation is 8 m and side slopes 1.5:1 in banking and 1 : 1 in cutting. The lateral slope of ground may be assumed as level.

BETA CONSOLE