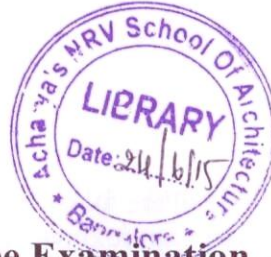


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09ARC6.6

Sixth Semester B.Arch. Degree Examination, June/July 2015
Estimating and Costing

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FOUR full questions from Q.No. 2 to Q.No. 7.**
2. Question No. 1 is compulsory.
3. Missing data may be suitably assumed.

- 1 The plan, section of a residential building are as shown in Fig.Q. No. 1. work out the quantities and cost of the following items at work using centre line method.
- a. Earthwork excavation in foundation at the rate of Rs 225/m³. (07 Marks)
 - b. Plain cement concrete 1 : 3 : 6 in foundation base at the rate of 3250/m³. (06 Marks)
 - c. Burnt Brick masonry for in CM 1: 6 for foundation at the rate of 2800/m³. (08 Marks)
 - d. 10cm thick damp proof course at the rate of 900/m³. (06 Marks)
 - e. First class brick work in cm 1: 6 of super structure at the rate of 3200/m³. (08 Marks)
 - f. Calculation of centre line and junctions and abstract of estimated cost. (05 Marks)

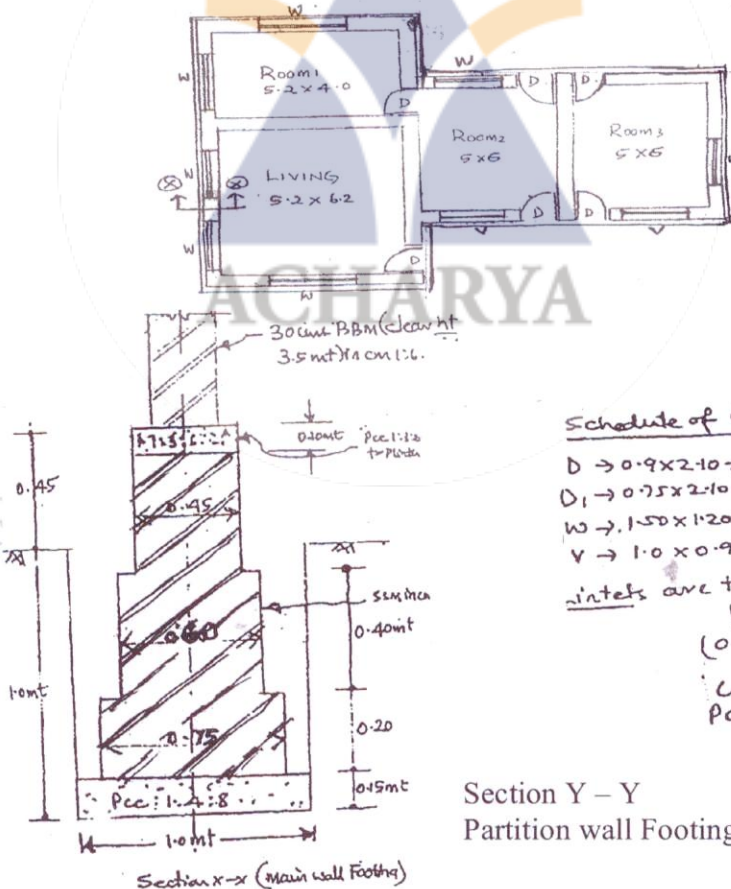


Fig.Q1

Section Y - Y
Partition wall Footing

- 2 Write detailed specification for the following items (any three).
- a. First class brick work.
 - b. Cement concrete 1 : 3 : 6 for foundation.
 - c. Distampering.
 - d. Cement plastering.

(15 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.

3 Explain briefly any three of the following (any three) :

- a. Preliminary estimate / approximate estimate.
- b. Cube rate estimate.
- c. Work charge establishment.
- d. Contingencies.

(15 Marks)

4 From the First principles arrive at the rate of any three below mentioned items of work :

- a. R.C.C. 1:1.5:3 roof slab.
- b. Providing 20mm thick double coat cement plaster in CM 1:4.
- c. P.C.C. 1:3:6 for foundation.
- d. Providing and laying 1:2:4 for Chajjah.

(15 Marks)

5 Calculate the quantity of earthwork for 600 mt. length for a portion of a road in an uniform ground , the height of banks at two ends being 1.00 and 1.6. The formation width is 10mt and side slopes 2:1 (horizontal vertical). Assume that there is no transverse slope. (15 Marks)

6 The steel quantity is to be computed diameter wise from the following data :

Size at column footing 1.5×1.5 mt in plan steel provided for footing $10\text{mm } \Phi @ 10\text{cm C/C}$ both ways. C/S of column $300\text{mm} \times 450\text{mm}$.

Main reinforcement of column - 4 Nos $\rightarrow 20\text{mm } \Phi + 2$ Nos - $16\text{mm } \Phi$.

Ties of column $1 \square - 8\text{mm } \Phi @ 10\text{cm C/C}$. Height of column 5.00 mt.

* wt of $8\text{mm } \Phi - .4\text{kg/mt}$ $20\text{mm } \Phi - 2.5\text{ kg/mt}$

wt of $10\text{mm } \Phi - .6\text{ kg/mt}$ $16\text{mm } \Phi - 1.6\text{ kg/mt}$.

(15 Marks)

7 Fig. Q7 Shows the details of Septic Tank, Prepare the estimate for the following items of work.

- a. P.C.C 1:3:6 for foundation using 40mm grade concrete.
- b. BBM in cm 1:4 with W.P.C for side walls of the tank.
- c. Plastering to internal wall in CM 1:4 with W.P. compound.

(15 Marks)

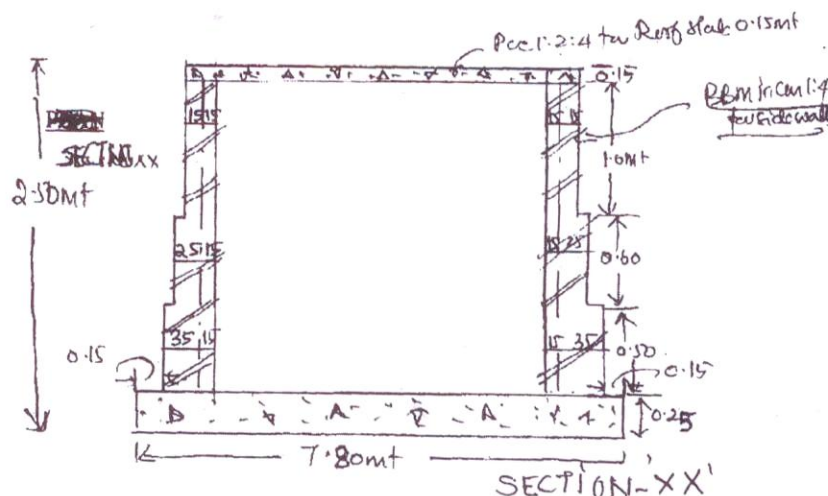
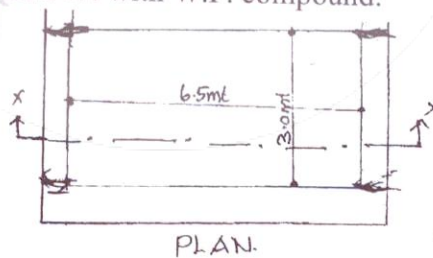


Fig.Q7