IV—Sem/CIVIL/2019(S)(New)

ESTIMATION AND COST EVALUATION - I

(Code : CET-405)

Full Marks : 80 *Time* : 3 hours

Answer any five questions including Q. Nos. 1 & 2

Figures in the right-hand margin indicate marks

1. Answer *all* the questions in brief : 2 × 10

   (a) What do you mean by lead and lift ?

   (b) Define lumpsum in estimating.

   (c) What are the unit weights for 12 mm ϕ and 10 mm ϕ bars for 1 m length ?

   (d) Write the units of measurements for the following items : Sand filling, Mild steel bar in RCC, DPC and R.B work.

   (e) Define the term "Plinth area".

   (f) Calculate the volume of modular and nominal brick.

   (g) What do you mean by plinth area estimate ?

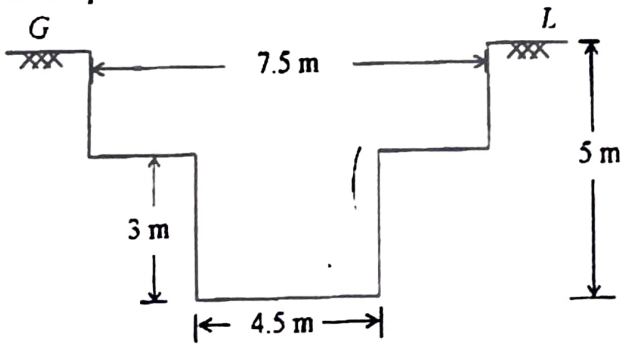
   (h) Calculate the number of bricks required for 1 cum brick work.

   (i) Define the term "Carpet area".

   (j) What do you mean by contingency and sundries ?

2. Answer *all* the questions : 5 × 6

   (a)



   Calculate volume of earthwork for a length of 15 mtr and find cost @Rs.350 per cum.

   (b) Calculate the nos. of brick and dry volume of mortar in 1 : 6 for 10 cum brickwork.

   (c) Calculate dry materials required for 650 m^2 of 25 mm thick DPC in cement concrete of grade M15.

   (d) Mention the duties and responsibilities of an Assistant Engineer.

   (e) Explain the duties and liabilities of owner.

(Turn Over)

(*ii*) Differentiate between Revised Estimate and Supplementary Estimate.

3. Calculate the following items of work for fig. 1 5 × 2

   (*i*) Earthwork excavation.

   (*ii*) 1st class brickwork in 1 : 6 cement mortar in foundation and plinth.

4. Prepare the detailed estimate of the building from the given plan and sectional elevation as shown in fig. 2 : 3 + 7

   (*i*) Earthwork in excavation.

   Or

   Earthwork in filling.

   (*ii*) 1st class brickwork in foundation and plinth in 1 : 6 cement mortar.

5. Determine the total quantities of 1st class brickwork in superstructure in lime mortar and of RCC work in vertical column. Refer fig.2. 7 + 3

6. Evaluate the quantities of the following items from fig.1 7 + 3

   (*i*) 1st class brickwork in superstructure in 1 : 6 cement mortar.

   (*ii*) 2.5 cm damp proof course.

7. Evaluate the quantities of the following items from fig.3 : 7 + 3

   (*i*) 12 mm thick cement plaster (1 : 6)

   (*ii*) Lime concrete in foundation.

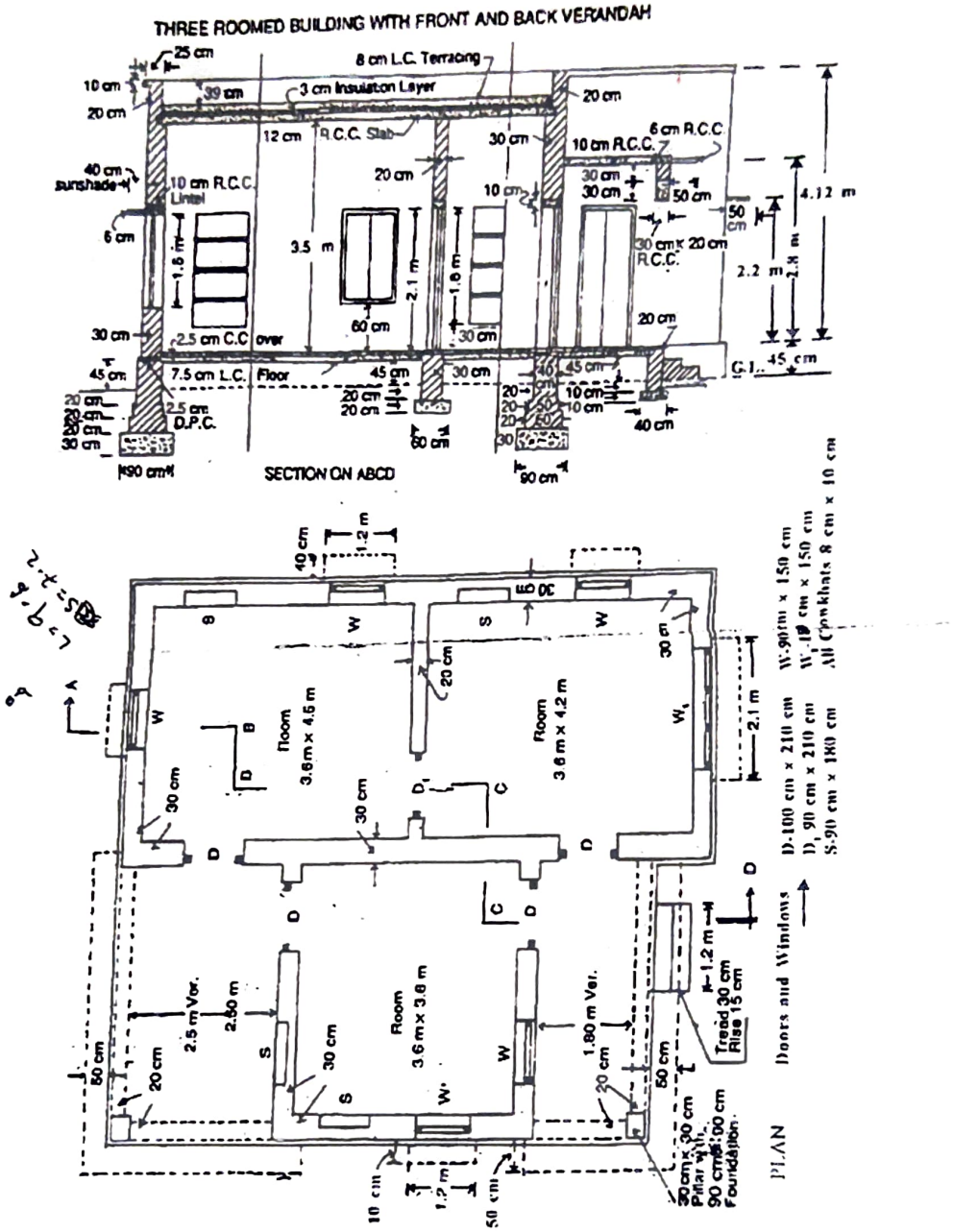


Figure - 1

(Turn Over)

TWO-ROOM BUILDING WITH FRONT VERANDAH

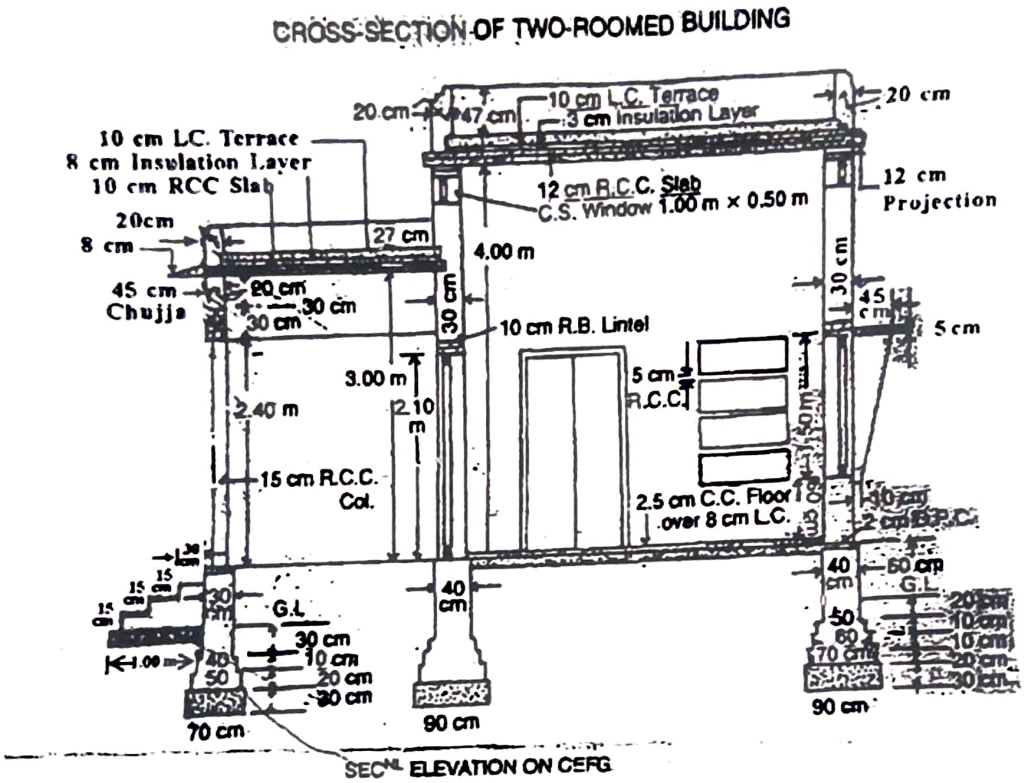


Figure - 2

TWO-ROOM BUILDING WITH FRONT VERANDAH

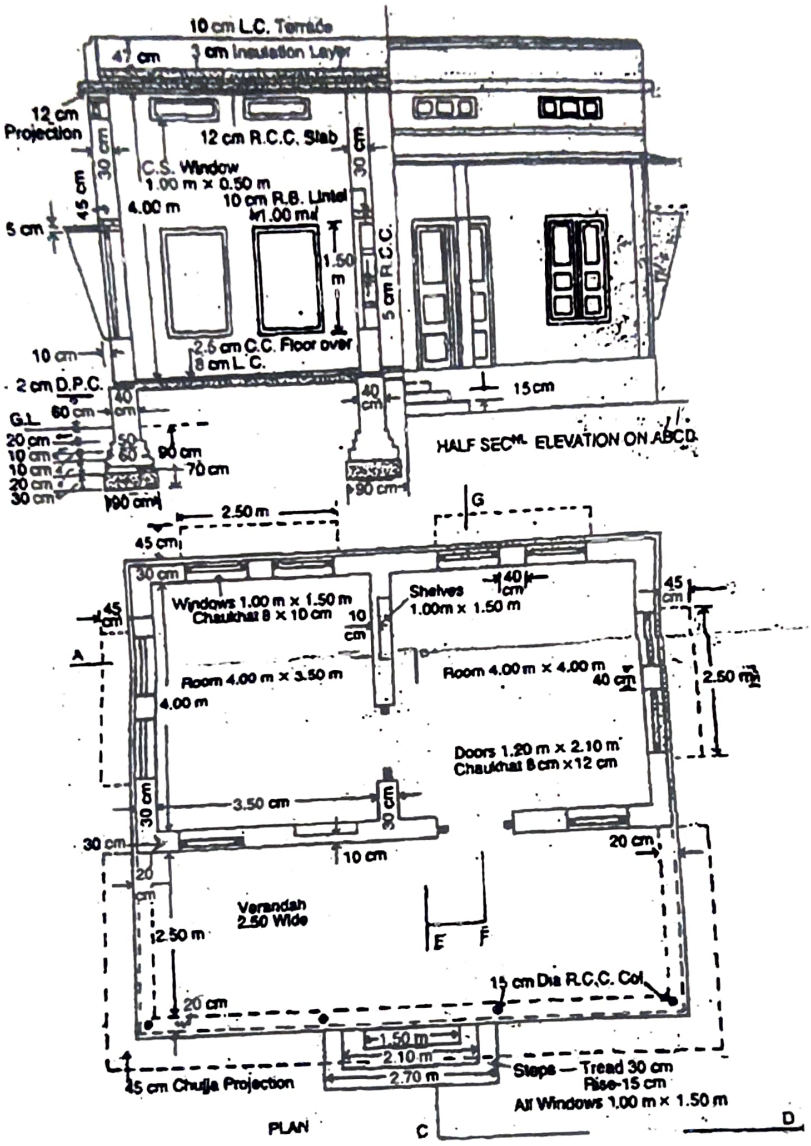


Figure - 2

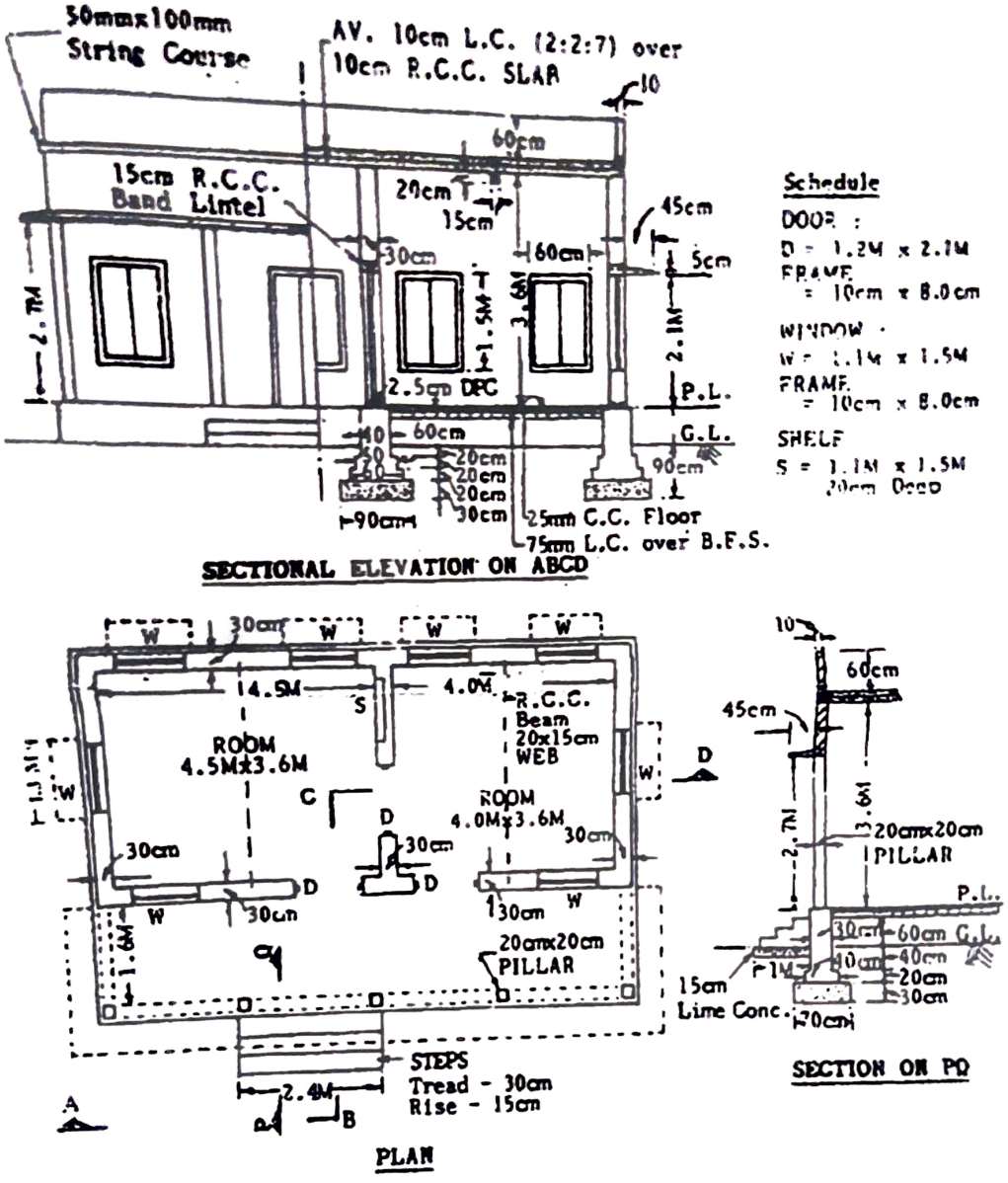


Figure - 3