

Th-4 Estimation & Cost Evaluation - I

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

- 1 Answer **All** questions 2 X 10
- Define plinth area of a building.
 - Outline the format of details of measurement form.
 - Write down the units of following items.
(i) DPC (ii) Reinforcement (iii) plastering (iv) wood work in chowkhat
 - What is volume and weight of one bag of cement available in the market?
 - State the actual and nominal size of a standard modular brick.
 - What do you mean by lead and lift.
 - Mention the multiplying factor for painting work in case of a panelled door and flush door.
 - Calculate the weight of a 20 mm diameter bar of 1m length.
 - What do you mean by "Schedule of Rate".
 - Outline the hierarchy of Engineering Dept. in State Govt.
- 2 Answer **Any Six** Questions 6 X 5
- Calculate the quantity of dry materials required for 12 mm thick cement mortar plastering (1:6) in wall for 200 sqm.
 - Estimate the quantity of Wood work in chowkhat for a door of size 1.2mX 2.1m and a window of size 1mX1.5 m. Size of chowkhat 8cmX12cm. Assume any other suitable data.
 - Find out the cost for 2 cum of cement concrete work in foundation in 1:2:4 proportion with suitable rates of material and labour as per PWD Orissa Rate.
 - Calculate the quantity of dry materials required for 2.5 cm thick cement concrete flooring in 1:2:4 proportion for a room of size 4m x 5m.
 - Briefly explain the types of estimate.
 - Find out the quantities of following items of work from figure 2
 - Brickwork in steps
 - 20 mm Cement plastering in step
 - Briefly outline the duties and responsibilities of a Junior Engineer.
- 3 Find out the quantities of following item of work from Figure 1 using Centre Line method 5+ 5
- Brick work in foundation and plinth
 - Brickwork in superstructure
- 4 Estimate the quantities of followings item of work from fig no 3 5+ 5
- Earth work in excavation
 - Cement concrete work in foundation
- 5 a Analyse the rate of 10 cum of first class brickwork in foundation and plinth with cement mortar (1:6). Consider suitable rates of material and labour as per PWD Orissa Rate. 7
- b What do you mean by depreciation. 3
- 6 Estimate the quantities of followings item of work from fig no 4 5+ 5
- R.C.C work excluding steel
 - Brickwork in foundation and plinth

- (a) Administrative approval
- (b) Analysis of rate
- (c) Contingencies
- (d) Salvage value

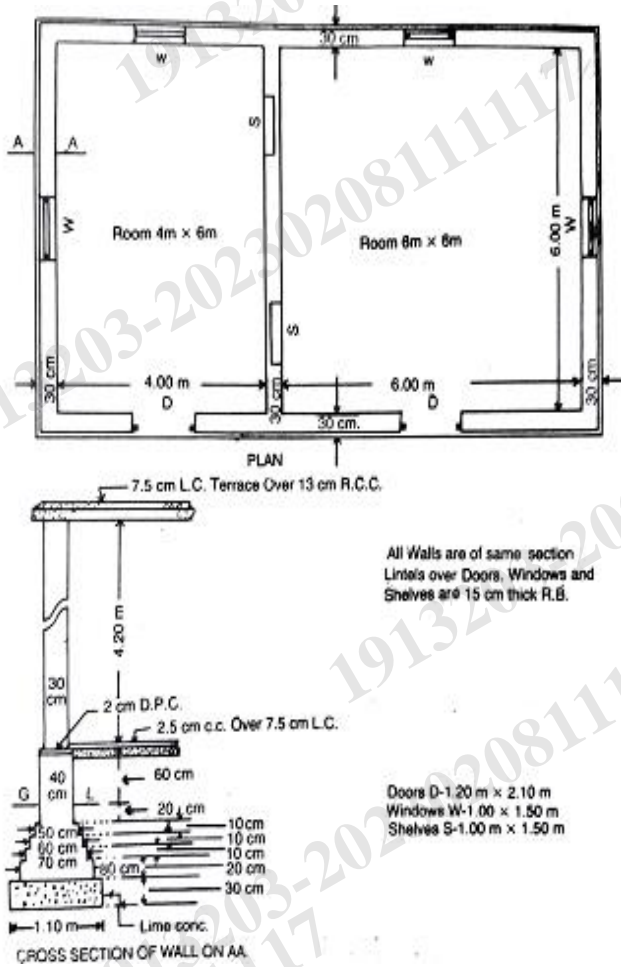


Figure 1

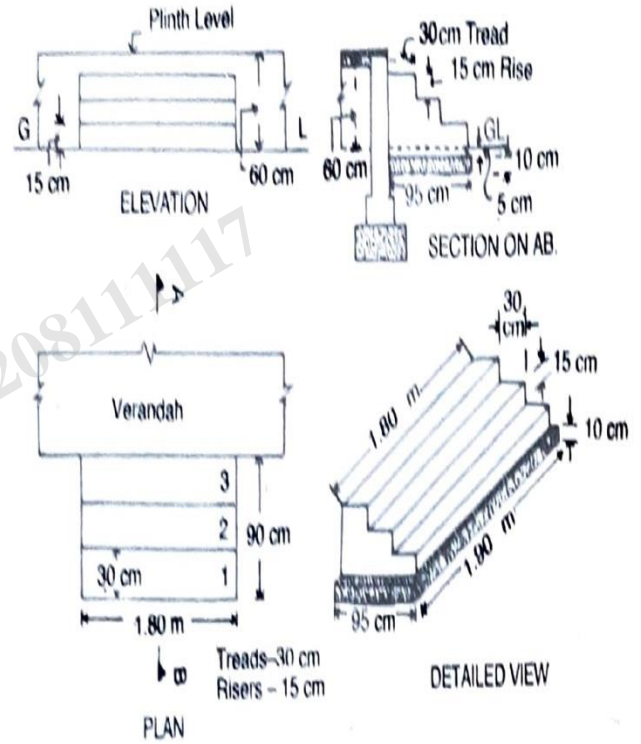
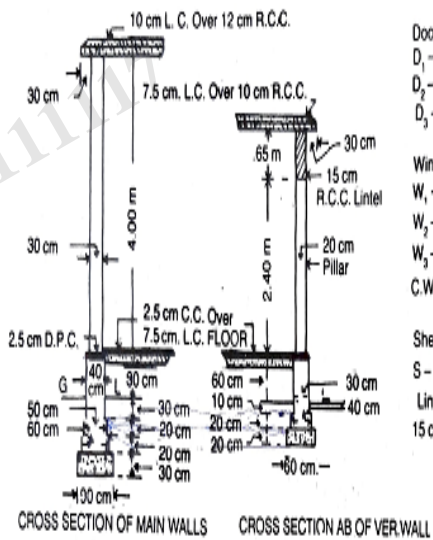
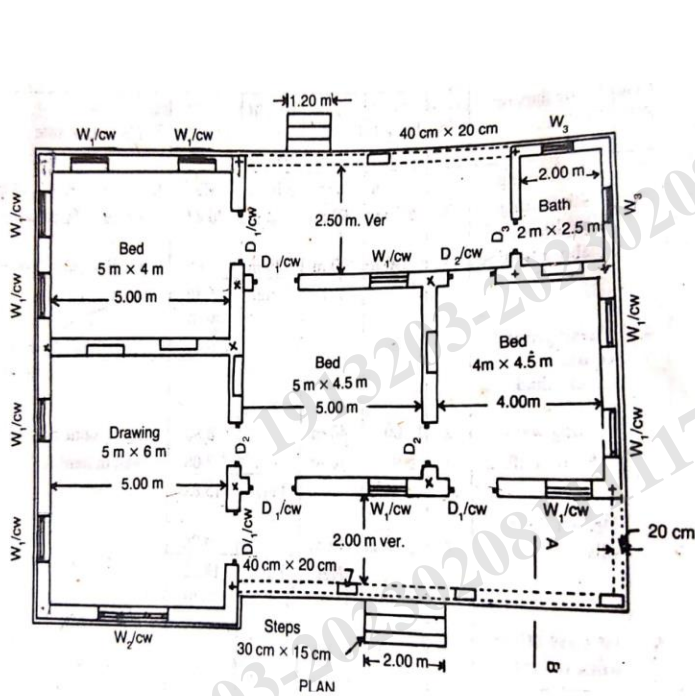


figure 2



Doors:-
 D₁ - 120 cm x 210 cm (1.20 m x 2.10 m)
 D₂ - 100 cm x 200 cm (1.00 m x 2.00 m)
 D₃ - 75 cm x 180 cm (.75 m x 1.80 m).

Windows:-
 W₁ - 100 cm x 150 cm (1.00 m x 1.50 m)
 W₂ - 200 cm x 150 cm (2.00 m x 1.50 m)
 W₃ - 75 cm x 120 cm (.75 m x 1.20 m)
 C.W. - 75 cm x 60 cm (.75 m x .60 m).

Shelves:-
 S - 100 cm x 150 cm (1.00 m x 1.50 m)
 Lintel Over Doors, Windows Etc.
 15 cm R.B.

Figure 3

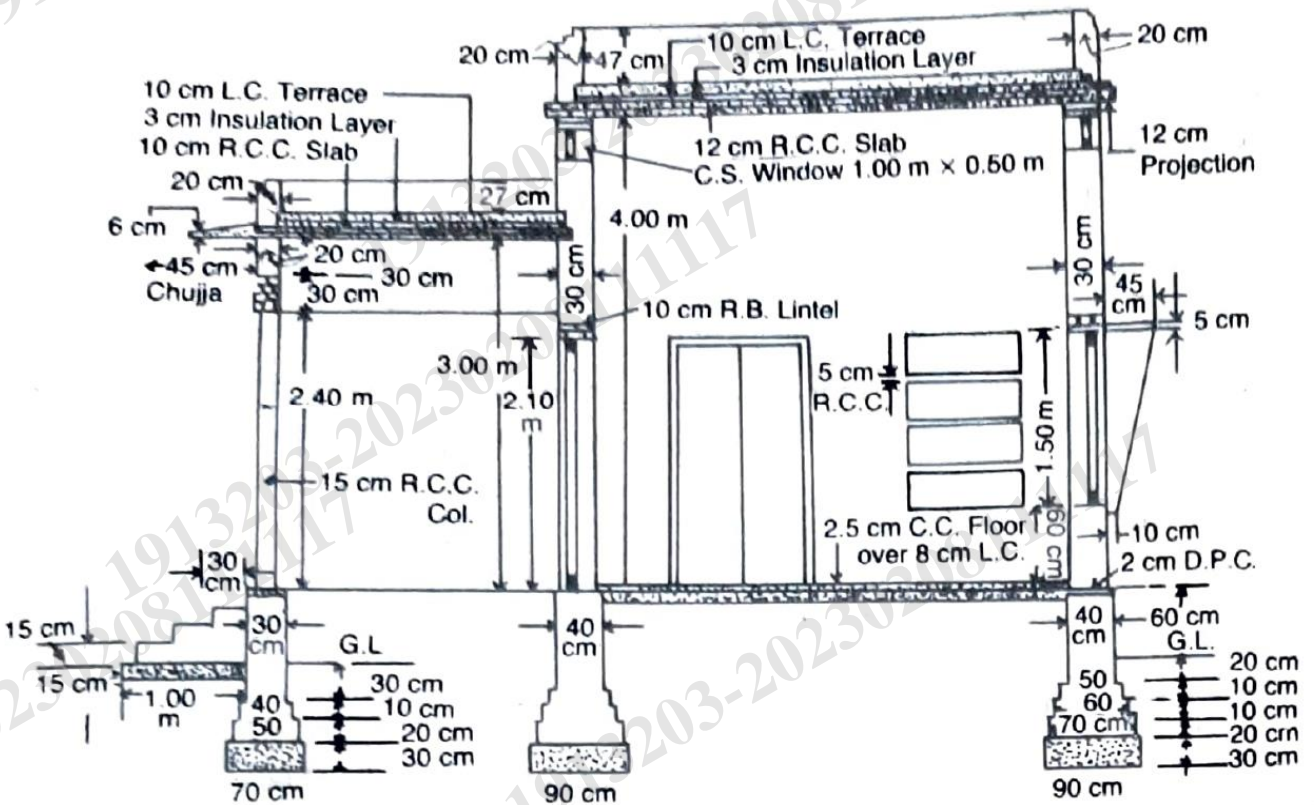


Figure - 4 (section on CEFG)

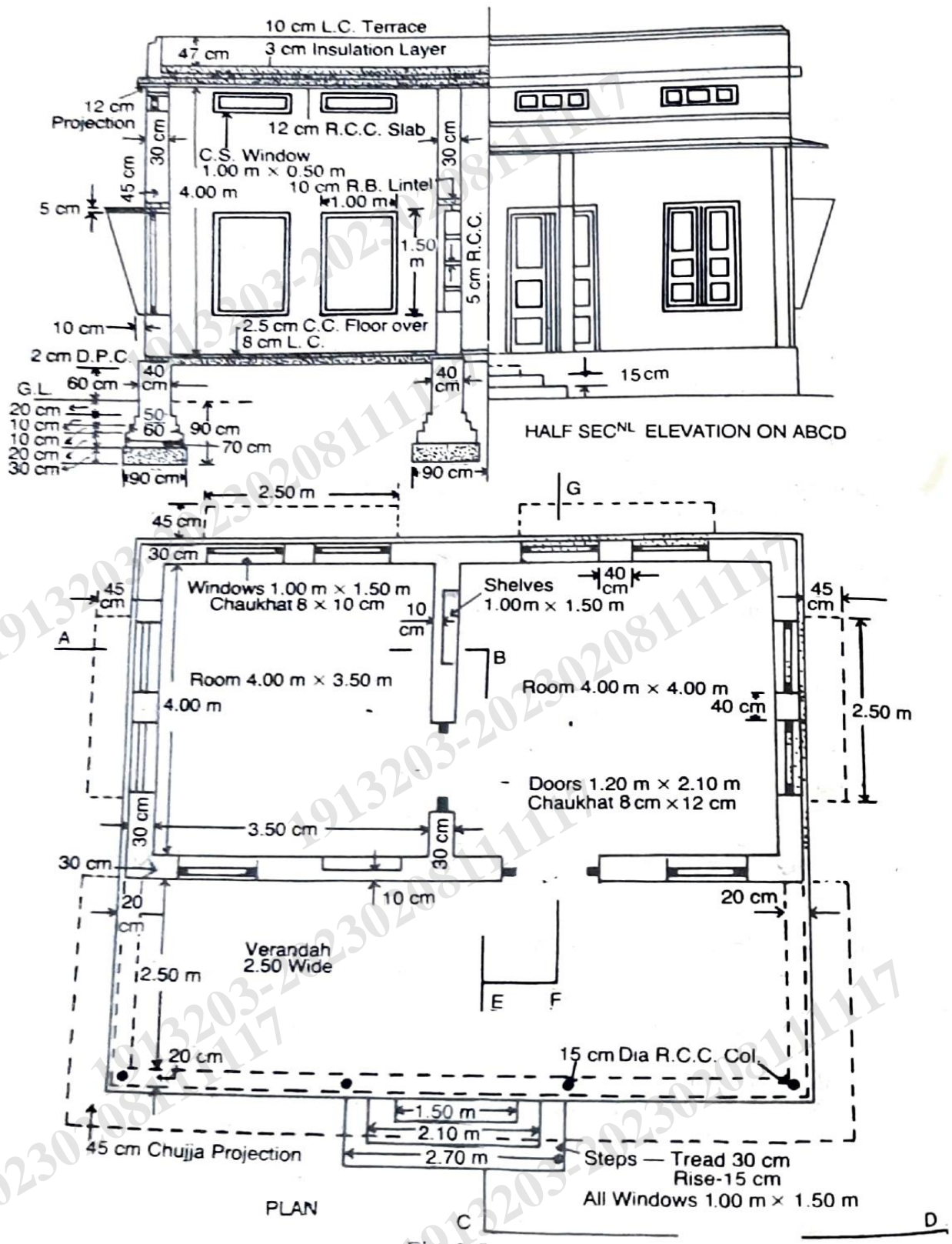


Figure 4