

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
  - a. Define plinth area of a building.
  - b. Outline the format of details of measurement form.
  - c. Write down the units of following items.  
(i) DPC (ii) Reinforcement (iii) plastering (iv) wood work in chowkhat
  - d. What is volume and weight of one bag of cement available in the market?
  - e. State the actual and nominal size of a standard modular brick.
  - f. What do you mean by lead and lift.
  - g. Mention the multiplying factor for painting work in case of a panelled door and flush door.
  - h. Calculate the weight of a 20 mm diameter bar of 1m length.
  - i. What do you mean by "Schedule of Rate".
  - j. Outline the hierarchy of Engineering Dept. in State Govt.
- 2 Answer **Any Six** Questions 6 X 5
  - a. Calculate the quantity of dry materials required for 12 mm thick cement mortar plastering (1:6) in wall for 200 sqm.
  - b. 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.
  - c. 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.
  - d. 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.
  - e. Briefly explain the types of estimate.
  - f. Find out the quantities of following items of work from figure 2
    - (a) Brickwork in steps
    - (b) 20 mm Cement plastering in step
  - g. 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
  - (a) Brick work in foundation and plinth
  - (b) Brickwork in superstructure
- 4 Estimate the quantities of followings item of work from fig no 3 5+ 5
  - (i) Earth work in excavation
  - (ii) 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). 7  
Consider suitable rates of material and labour as per PWD Orissa Rate.
- b What do you mean by depreciation. 3
- 6 Estimate the quantities of followings item of work from fig no 4 5+ 5
  - (i) R.C.C work excluding steel
  - (ii) Brickwork in foundation and plinth

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

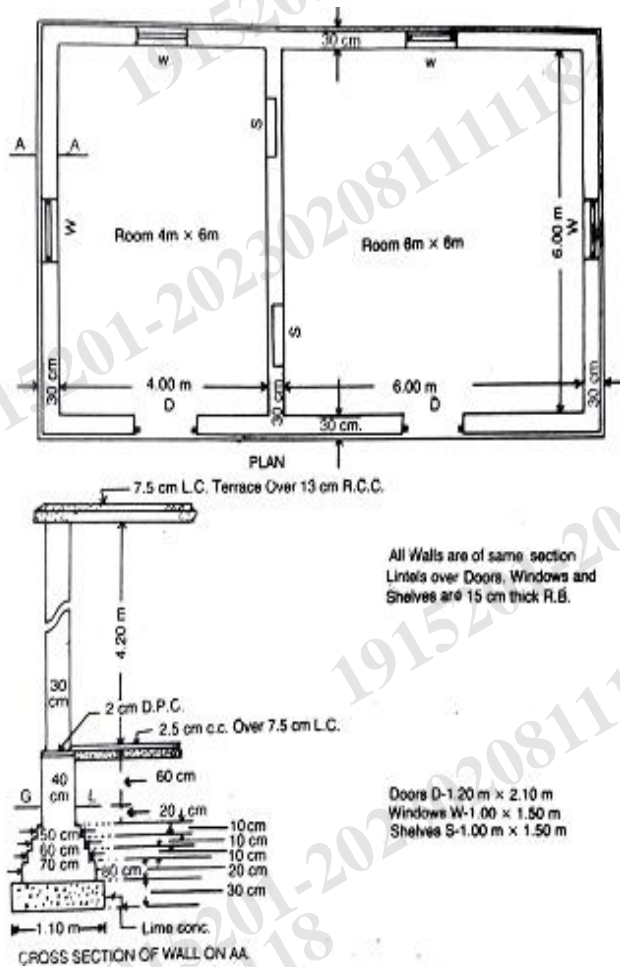


Figure 1

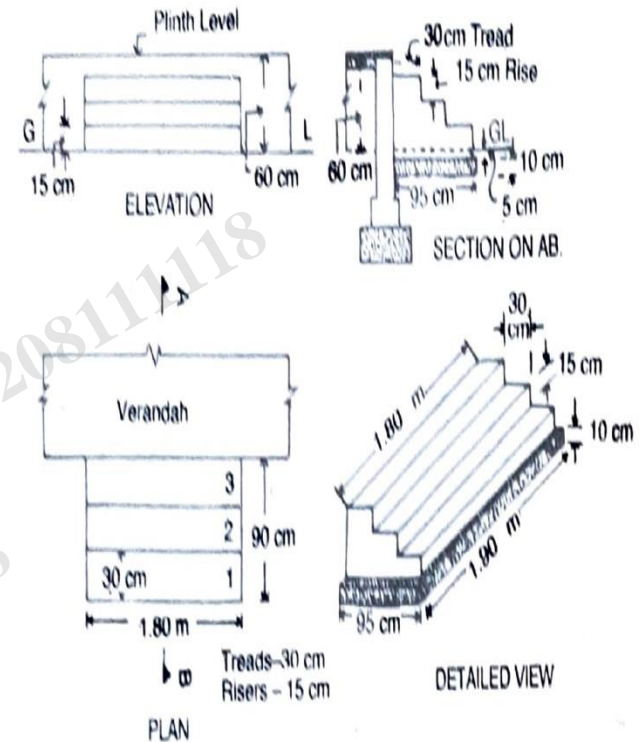


figure 2

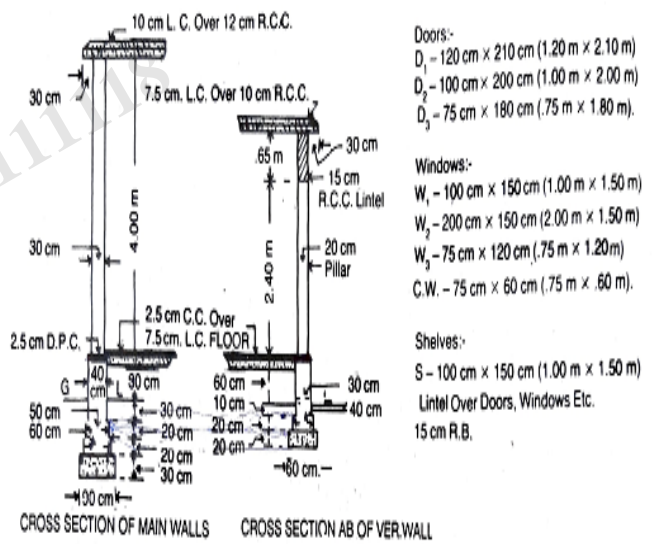
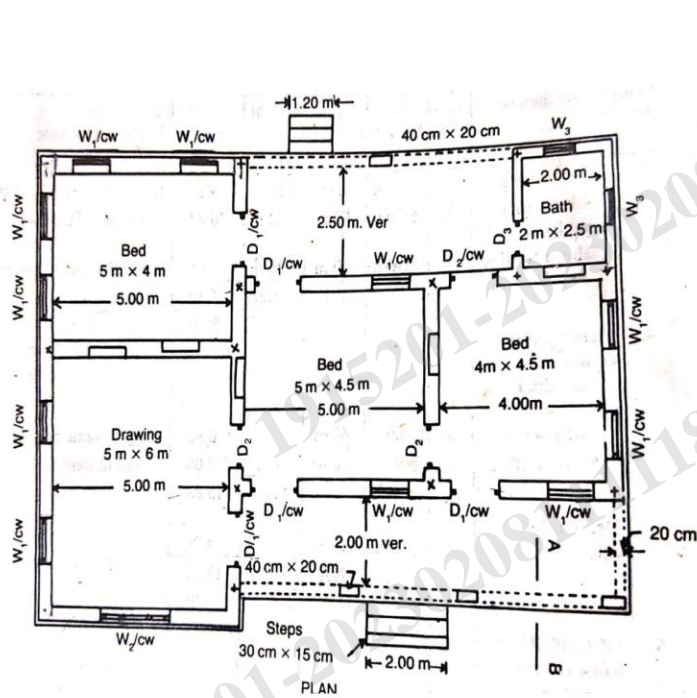


Figure 3

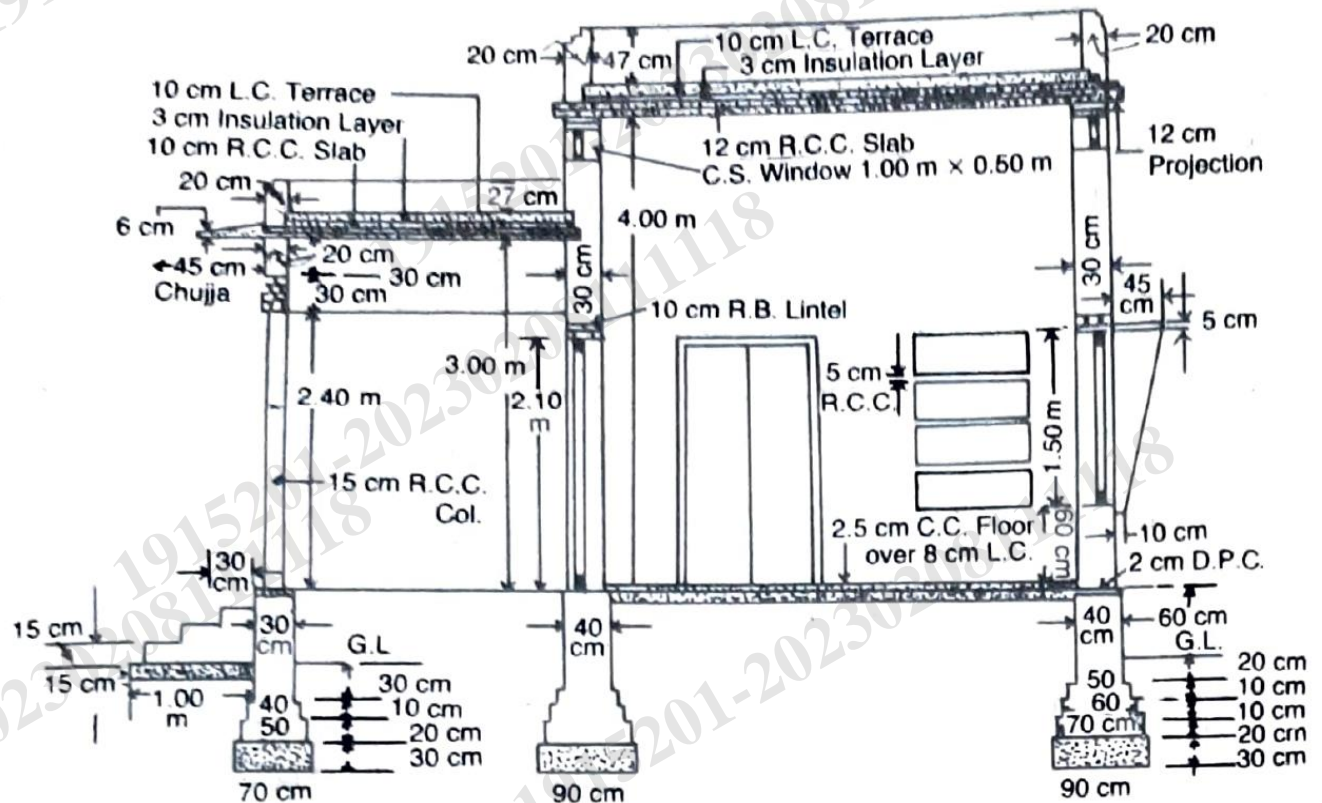


Figure – 4 (section on CEFG)

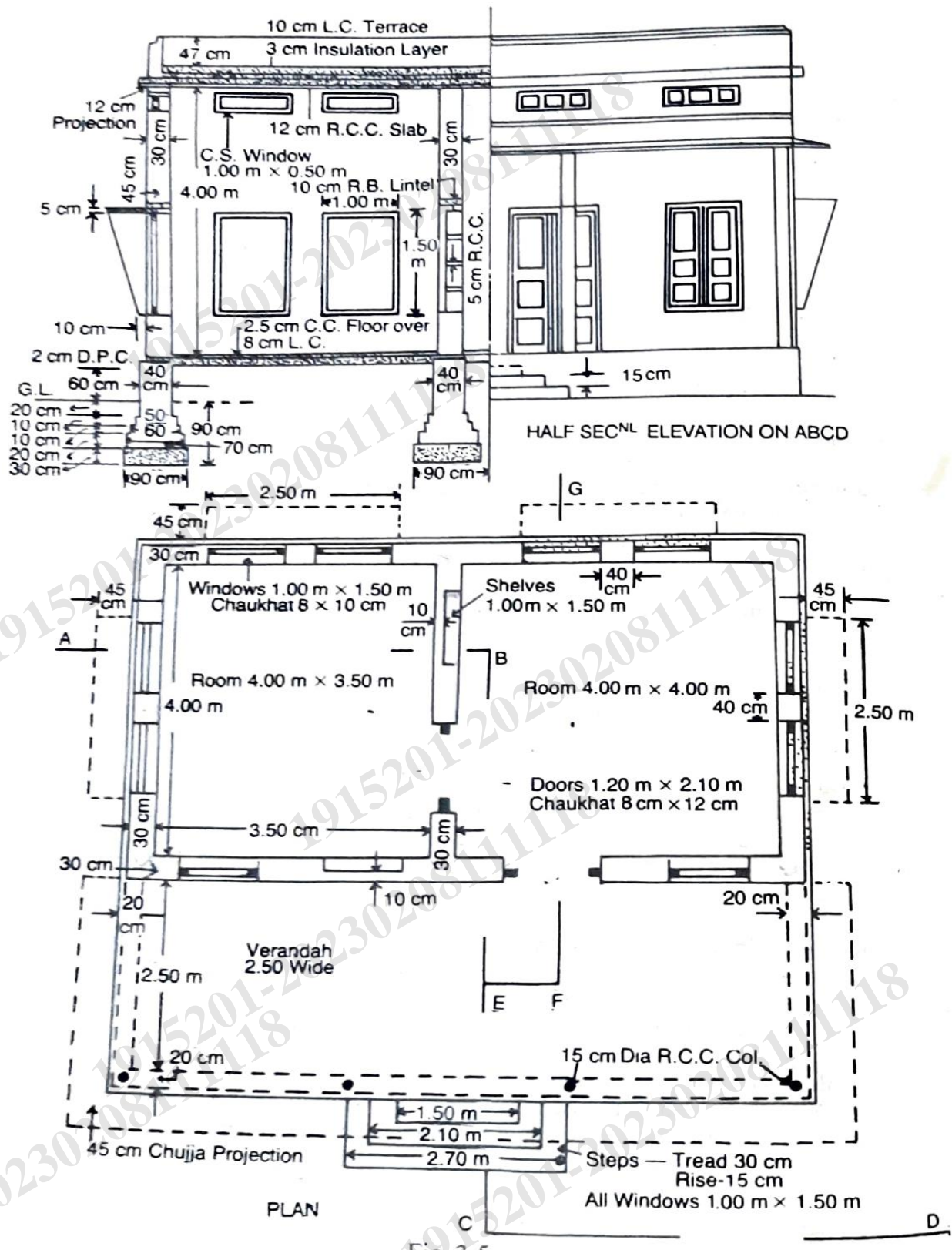


Figure 4