

3RD SEM./CIVIL ./ 2024 (W)

TH4 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
 - a. Define circulation 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. Calculate the weight of a 20 mm diameter bar of 1m length
 - e. Outline the hierarchy of Engineering Dept. in State Govt.
 - f. Define Salvage value.
 - g. When Centre line method of estimating is preferred.
 - h. What do you mean by revised estimate.
 - i. What is the multiplying factor for painting in both side surface of a panelled and flush door?
 - j. What do you mean by "Schedule of Rate".

2. Answer **Any Six** Questions 5 x 6
 - a. Find out quantity of dry materials required for 200 sqm of Cement Concrete flooring in 1:2:4 proportion.
 - b. Estimate the quantity of Wood work in shutter for a Door of size 1.2mX 2.0m and for a Window of size 1m x 1.5 m. Size of chowkhat 8cmX12cm. Assume any other suitable data.
 - c. Find out the cost of 4 cum of brick work in foundation and plinth (1:6) with 20cm x 10 cm x 10 cm bricks with suitable rates of material and labour as per PWD Orissa Rate.
 - d. Briefly outline the duties and responsibilities of a Junior Engineer.
 - e. Write short notes on 2.5 x 2
 - (a) Administrative approval
 - (b) Workcharged establishment
 - f. Calculate quantity of earthwork and Brickwork from Figure1.
 - g. Calculate the quantity of dry materials required for 12 mm thick cement mortar plastering (1:6) in wall for 200 sqm.

Answer **Any Three** Questions

- | | | |
|---|--|---------|
| 3 | Find out the quantities of following item of work from Figure 2 using Centre Line method | 10 |
| | (a) Brick work in foundation and plinth | |
| | (b) Brickwork in superstructure | |
| 4 | a Find out quantity of first class brickwork in cement mortar from Figure 3 | 5 |
| | b Briefly explain the types of estimate. | 5 |
| 5 | Find out the quantities of following item of work from Figure 4 | 3+3+4 |
| | (a) Earthwork in excavation | |
| | (b) Brickwork in foundation and plinth | |
| | (c) Brickwork in superstructure | |
| 6 | a Analyse the rate for 10 cum of cement concrete 1:5:10 in foundation. | 7 |
| | b What do you mean by depreciation. | 3 |
| 7 | Write short notes on | 2.5 x 4 |
| | (a) Technical sanction | |
| | (b) Plinth area | |
| | (c) Lead and Lift | |
| | (d) Contingencies | |

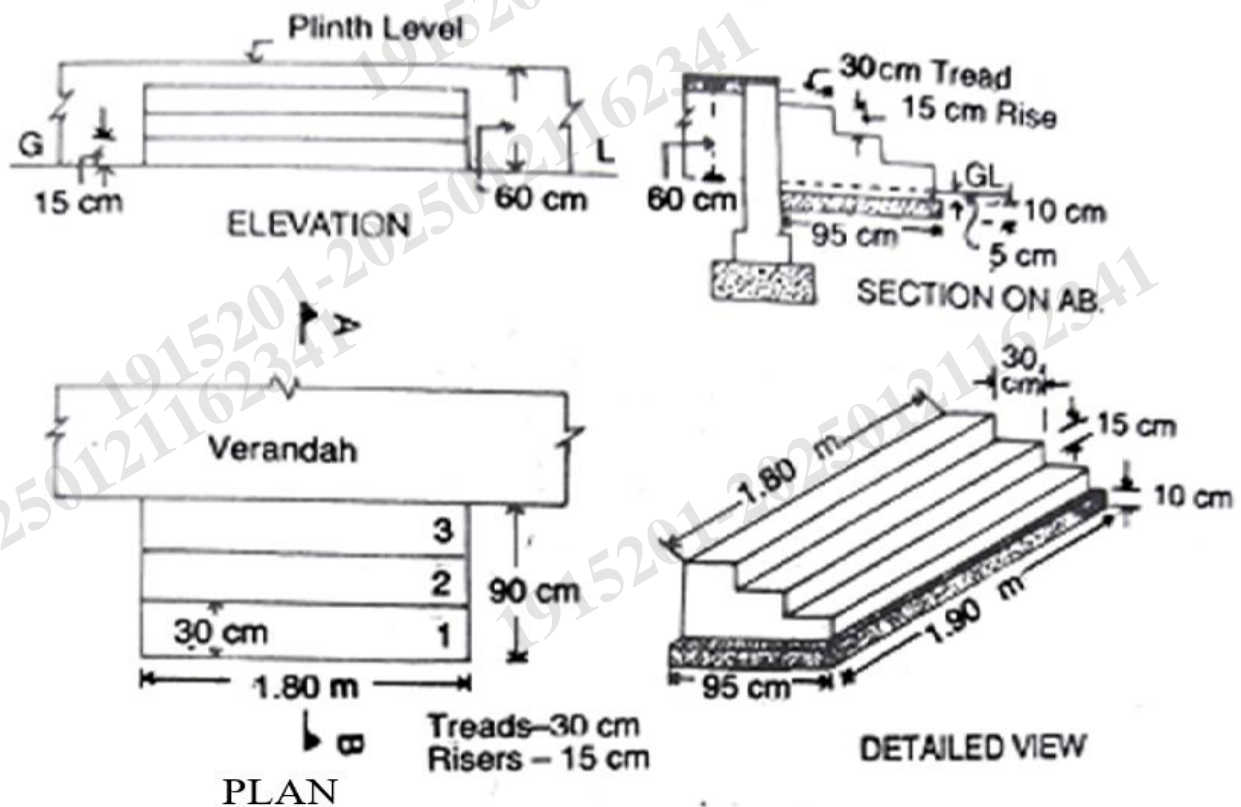


Figure 1

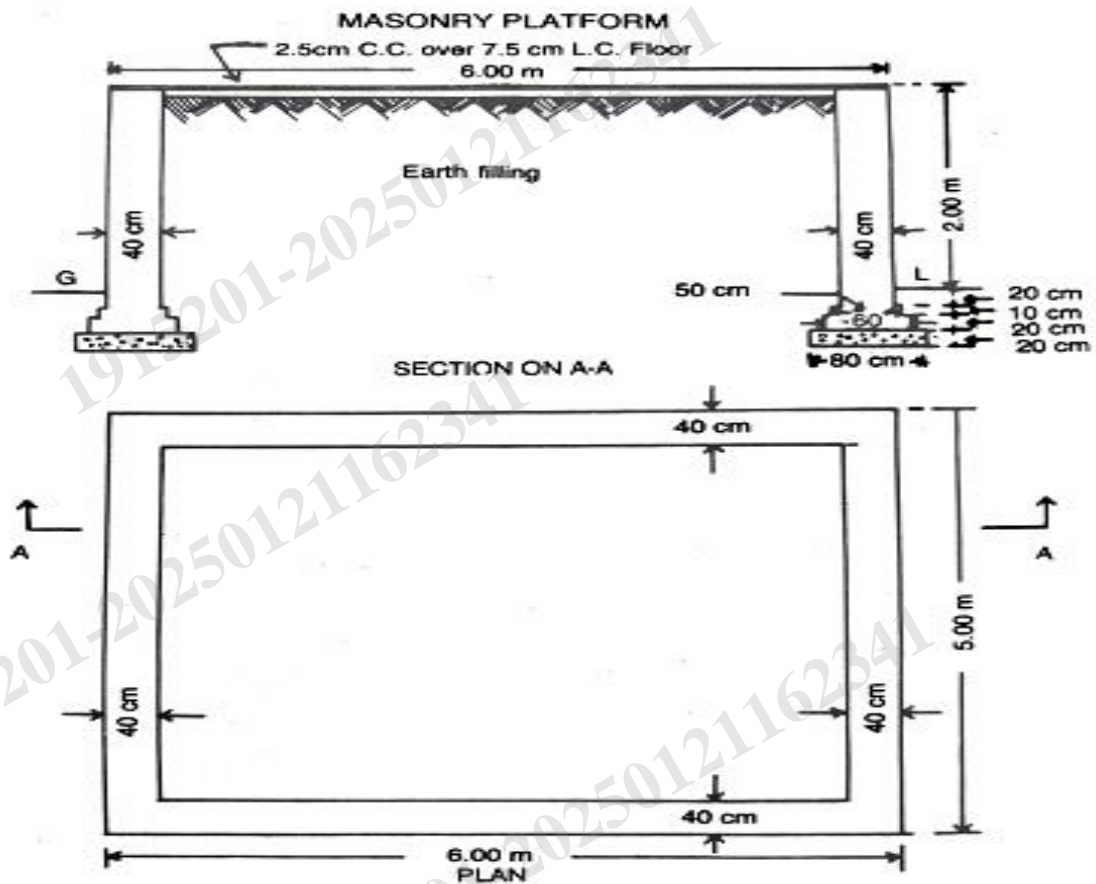


Figure 3

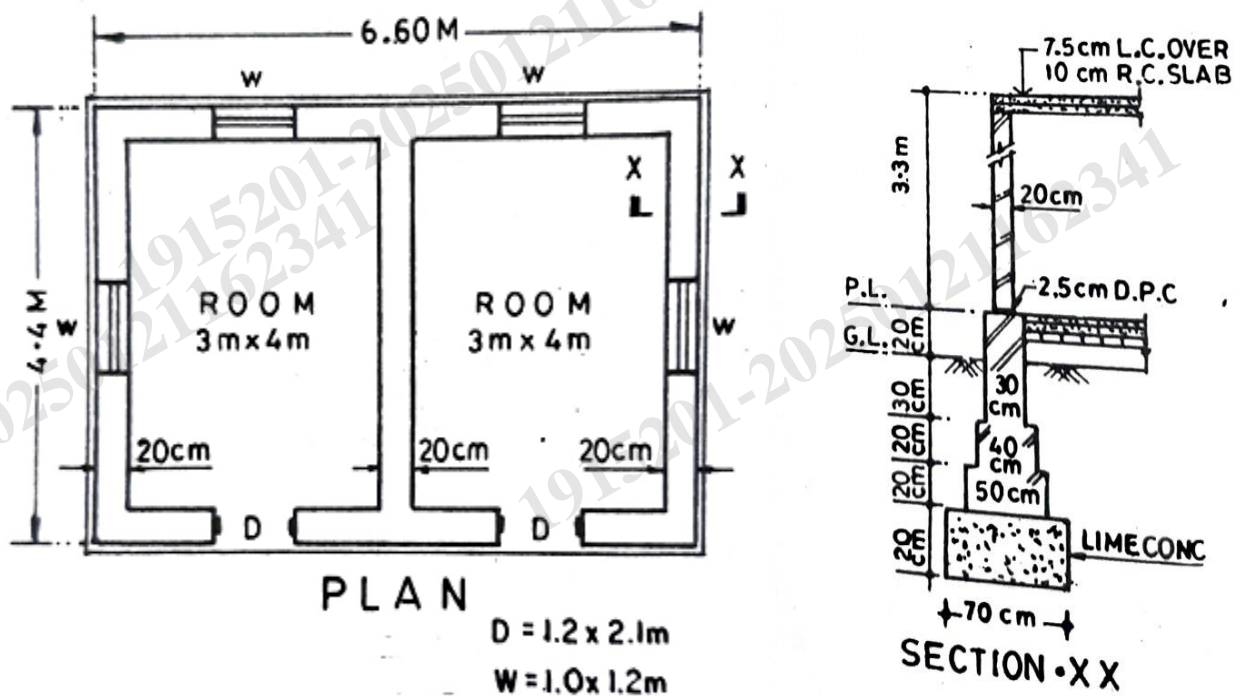


Figure 4