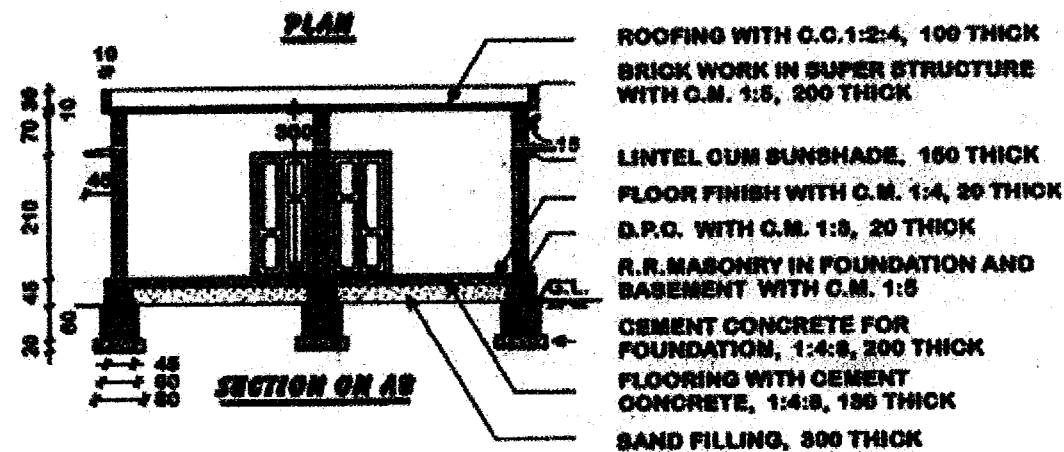
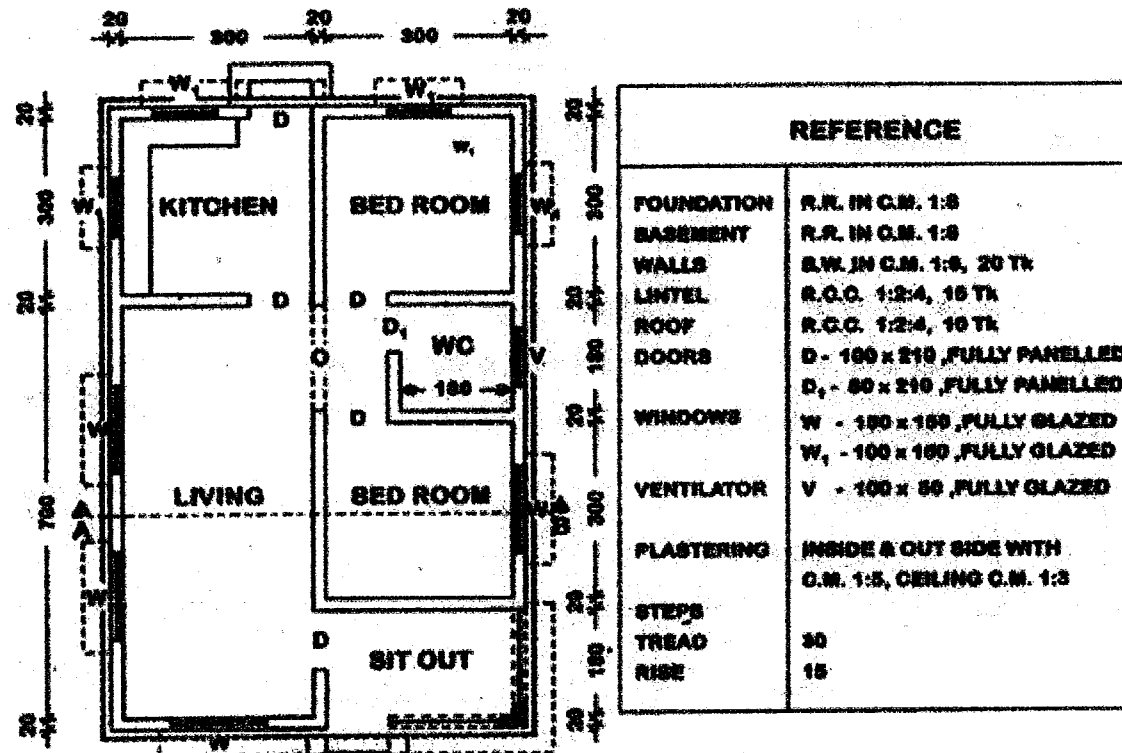


(Sketch A to accompany)

Sketch A



A THREE ROOMED RESIDENTIAL BUILDING WITH R.C.C. ROOF
ALL DIMENSIONS ARE IN CM.

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April 2024

Time - Three hours
(Maximum Marks: 100)

- [N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. What is approximate estimate?
2. What is plinth area?
3. What is specification? Mention the types of specification.
4. Write any three points to be considered for report writing.
5. Write painting co-efficient for paneled door, flush door and partly paneled & partly glazed door.
6. What is meant by Schedule of Rates?
7. Define obsolescence.
8. Define Mortgage.
9. Write short note on Trade system.
10. Prepare detailed estimate of RCC slab of 125 mm thick in a room of inner dimension 5 m x 6 m and wall thickness as 0.23 m.

PART - B

11. (a) Explain the various types of estimate.
(Or)
(b) The actual cost of a single storey residential building of plinth area 90m² is found to be Rs.15,30,000/- in which 60% is towards the cost of materials and 40% is towards the cost of labour. It is proposed to construct a similar building of same specification with a plinth area of 120 m² at a place where the cost of materials to be 20% more and cost of labour is 15% less. Estimate the rough cost of the proposed building.

12. (a) Write a detailed specification for RCC works in slab.
(Or)
(b) Write a detailed report to accompany the estimate for the construction of a school building.
13. (a) (i) A brick masonry wall of 200 m² area has to be plastered with 12 mm thick, 1:4 Cement Mortar allowing 15% excess mortar for wastage. Calculate the quantity of cement and sand required for the work. (9)
(ii) Calculate the material required for preparing the Surkhi mortar 1:1:1 ½ of 1m³ (5).

(Or)

- (b) RCC column with mix 1: 1½ :3 of 300 x 300 mm with suitable reinforcement - 1 m³.

C. Concrete 1 : 1½ : 3 - 10 m³

Broken Stone	- 9 m ³
Sand	- 4.5 m ³
Cement	- 4308 Kg
Mason II class	- 3.50 Nos.
Mazdoor I Class	- 21.20 Nos.
Mazdoor II Class	- 35.30 Nos.
Mixing Charges	- As Required.

RCC Column 1 : 1½ : 3 , 300 x 300 mm size - 1 m³

Concrete 1: 1½ :3	- As required
Steel	- 150 Kg /m ³ of concrete
Binding wire	- 1% of reinforcement
Bar bending	- As required

Cost of materials at site

Cement	- 5200 / tonne
Steel	- 20000 / tonne
Binding wire	- 75 / Kg
Broken stone 20mm size	- 500 / m ³
Sand	- 400 / m ³
Bar bending	- 200/100 Kg
Mixing charges	- 180 / m ³

Cost of labour

Mason II class	- 600 / each / day
Mazdoor I Class	- 550 / each / day
Mazdoor II Class	- 500 / each / day

14. (a) A residential building constructed 15 years before is situated on a plot whose land area is 400 m². The plinth area of the building is 180 m². The cost of construction of the building is 10 lakhs. The cost of land is 1000 / m². The rate of depreciation for the building is 1% per annum. Calculate the present value of the property.

(Or)

- (b) A building is constructed on a land costing Rs. 5 lakhs. The cost of construction was Rs. 15 lakhs. The life of the building is 60 years. Sinking fund is to be provided with 5% interest. The owner expects return of 5% on the cost of land and 8% on the cost of construction. Annual repair may be 2% of cost of construction and other outgoings to be 30% of net return. Calculate the rent per month.

15. (a) Prepare the detailed estimate for RCC works - Roof slab, lintel, sunshade for the given sketch A. Take bearing of lintel as 200 mm.

(Or)

- (b) Prepare the detailed estimate for the following items of work for the given sketch A
(i) Brick work in Super Structure. (10)
(ii) Ceiling Plastering. (4)