

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL - 2024**

QUANTITY SURVEYING - I

[Maximum marks: 100]

[Time: 3 Hours]

PART – A

Maximum marks: 10

I. (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. Define Lead.
2. Define sundries.
3. List any two items of work in construction of a residential building.
4. List the unit of measurement of
 - (i) Gate valves
 - (ii) watersupply pipes.
5. Define Abstract Estimate. (5 x 2 = 10)

PART – B

Maximum marks: 30

II. (Answer any *five* of the following questions. Each question carries 6 marks)

1. Define the terms contingencies and work charged establishment.
2. Compare Approximate Estimate and Detailed Estimate.
3. Explain Long wall – Short wall method of estimation.
4. Describe the procedure for estimation of quantities for RCC work.
5. Explain the rules for deduction in finishing work for openings on walls.
6. Explain Analysis of Rates.
7. Explain Schedule of Rates. (5 x 6= 30)

PART – C

Maximum marks: 60

(Answer *one full* question from each unit. Each full question carries 15 marks)

UNIT – I

III. (a) Explain plinth area method and service unit method. (7)

- (b) Find the capacity of reservoir from 50m contour to 110m contour using Trapezoidal formula from the following table. (8)

Contour in m	50	60	70	80	90	100	110
Area in m ²	1400	2300	3800	4900	6400	8700	9900

OR

- IV. (a) Explain Supplementary Estimate and Revised Estimate. (7)
- (b) Explain Mid-section, Trapezoidal and Prismoidal method of earth work computation. (8)

UNIT – II

- V. (a) Calculate the quantity of PCC in foundation for building shown in Fig.1. (7)
- (b) Determine the quantity of RR masonry in basement for the building shown in Fig.1. (8)

OR

- VI. (a) Calculate the quantity of wood work in frames of windows for the building shown in Fig.1. (7)
- (b) Determine the quantity of RCC 1:1.5:3 for roof slab for the building shown in Fig.1. (8)

UNIT - III

- VII. (a) Explain the procedure for computing the quantities of plastering work on walls of building. (7)
- (b) Calculate the quantity of Cement concrete for cement concreting 1km length of 3.70m wide road for 8cm thick layer. Also calculate cost at the rate of Rs.375 per cum. (8)

OR

- VIII. (a) Explain the procedure for computing the quantities of RCC water tank. (7)
- (b) Calculate the quantity of RCC work for rectangular water tank with inner dimensions 5x3x2m and wall thickness 0.3m. (8)

UNIT – IV

IX. Work out the rate per unit for RCC 1:2:4 using 20mm broken stone.

Materials:

0.01 m³ broken stone @ Rs.1200/m³

0.004 m³ sand @ Rs.2100/m³

3.4 kg cement @ Rs.8250/ton

Labour:

0.005 mason @ Rs.850/Each

0.02 man @ Rs.500/Each

0.02 woman @ Rs.400/Each

Conveyance Charges:

Broken Stone : 20 km @ Rs.25/km/m³

Sand : 25 km @ Rs.20/km/m³

Cement : 10 km @ Rs.65/km/ton

(15)

OR

X. Work out the rate per unit for PCC 1:1.5:3.

Materials:

0.84 m³ stone aggregates @ Rs.1400/m³

0.42 m³ sand @ Rs.1500/m³

0.38 tons cement @ Rs.5000/ton

Labour:

0.12 mason @ Rs.750/Each

1.5 beldar @ Rs.650/Each

0.65 bhisti @ Rs.720/Each

Hire Charges:

0.06 days Concrete mixer @ Rs.800/day

0.06 days Needle vibrator @ Rs.350/day

(15)

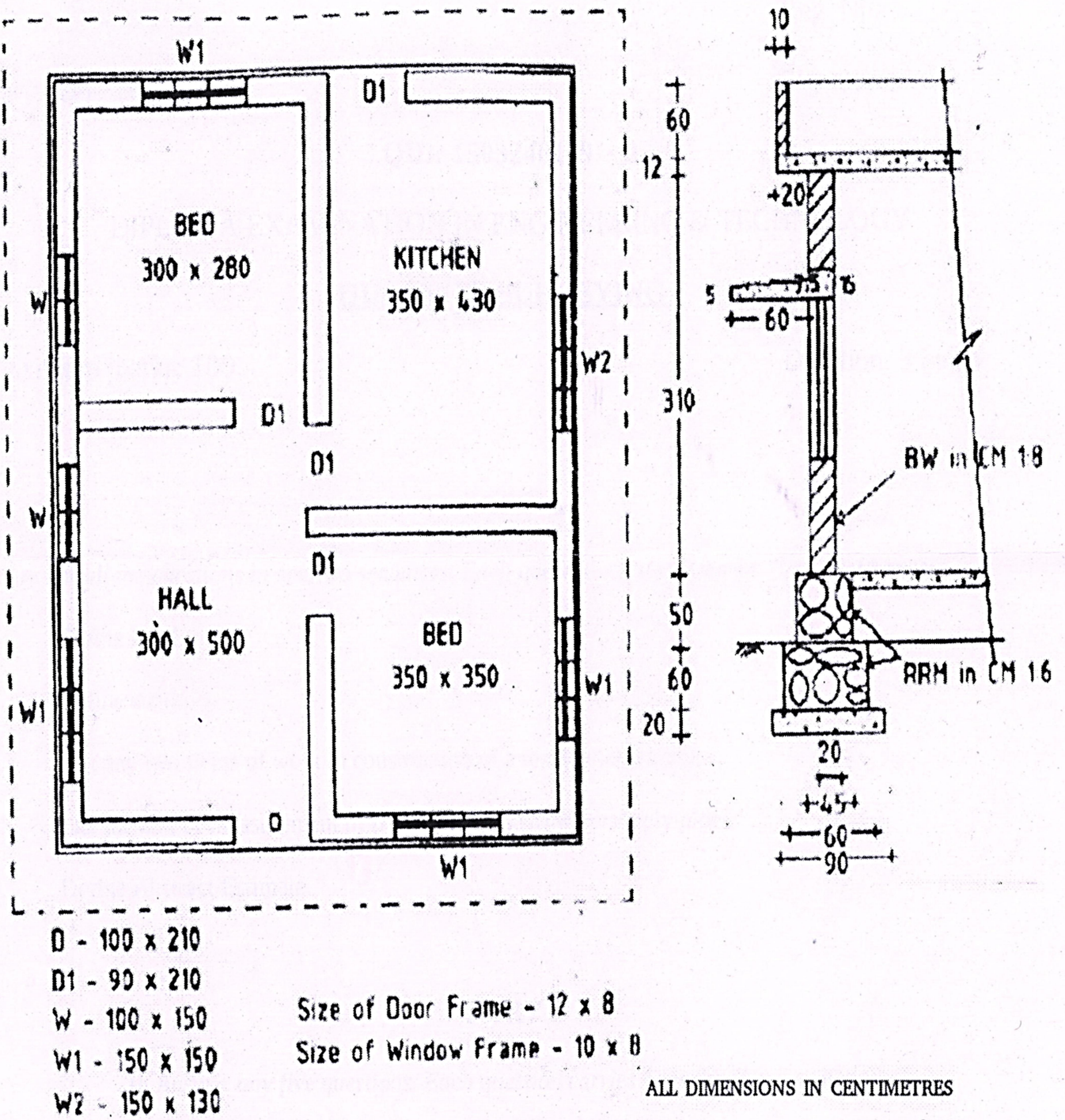


Fig. 1 Plan and Sectional Elevation of Building