7411

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DAA – FOURTH SEMESTER EXAMINATION

QUANTITY SURVEY

Time : 3 Hours]   [*Total Marks* : 80

PART—A   3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Write the units of measurement for the following items of work :

(a) Plastering to walls

(b) RCC in beams

(c) Brick masonry

2. Write the units of measurement for the following materials :

(a) Sand

(b) Cement

(c) Iron for window grills

3. State the need of "Approximate Estimate".

4. A residential building is measuring 15 m × 15 m externally and floor height is 3·3 m. Calculate the cost of building, if cubic content rate is ₹18,500 per cu.m.

5. Draw the tabular form of detailed estimate.

6. A door size is 1.0 m × 2.1 m and the cross-section of door frame is 120 mm × 60 mm. Calculate the quantity of wood required for the door frame.

7. How many bags of cement is required for 90 cu.m of foundation bed with PCC 1 : 5 : 10, if aggregate is 0.95 cu.m in one cum of PCC 1 : 5 : 10?

8. Calculate the number of bricks required for constructing a compound wall of 55 m × 1.8 m× 0.3 m.

9. Calculate the cost of 1 cu.m of aggregates at site, if cost at source is ₹975 per cum and conveyance distance is 45 km of metal road and conveyance charge is ₹95·00 per cu.m per 1 km on metal road.

10. Calculate the cost of 1 cu.m of sand at site, if cost at source is ₹1575 per cu.m and conveyance distance is 12 km of sandy soil and 45 km of metal road and conveyance charge is ₹15·50 per cu.m per 1 km on metal road.

<div align="center">

PART—B 8×5=40

</div>

Instructions : (1) Answer **all** questions, either *(a)* or *(b)* from each question.

(2) Each question carries **eight** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. *(a)* Prepare a preliminary estimate of a primary school building with a plinth area of 1500 sq.mt. using the following data :

(i) Plinth area rate : ₹19,750 per sq.mt.

(ii) Cost of water supply and pipelines : 8% of building cost

(iii) Cost of sanitary fittings and installation : 7.5% of building cost

(iv) Cost of electrification : 7.5% of building cost

(v) Cost of architectural features : 1.25% of building cost

(vi) Contingencies and supervision charges : 5% of overall cost

<div align="center">

(OR)

</div>

(b) Prepare a preliminary estimate of a two storied shopping mall with external dimensions of 21 m × 36 m using the following data :

(i) Plinth area rate : ₹18,000 per sq.mt.

(ii) Cost of water supply and pipelines : 8% of building cost

(iii) Cost of sanitary fittings and installation : 7.5% of building cost

(iv) Cost of electrification : 8% of building cost

(v) Cost of architectural features : 3.5% of building cost

(vi) Contingencies : 2·5% of overall cost

(vi) Supervision charges : 2·5% of overall cost

12. *(a)* Estimate the quantities of the following items of the building shown in Fig-1 :

(i) Earthwork excavation for foundations

(ii) 2·5 cm damp proof course over plinth wall

(OR)

(b) Estimate the quantities of the following items of the building shown in Fig-1 :

(i) External plastering to walls

(ii) Ceiling plastering

13. *(a)* Estimate the quantities of the following items of the building shown in Fig-1 :

(i) Brick work in footings

(ii) RCC in lintel beams over doors and windows

(OR)

(b) Estimate the quantities of the following items of the building shown in Fig-1 :

(i) RCC 1 : 2 : 4 in roof slab

(ii) PCC bed (1 : 5 : 10) in foundation

14. *(a)* Estimate the quantities of the following items of the building shown in Fig-1 :

(i) Marble flooring in all rooms

(ii) Enamel painting to door shutters

(OR)

(b) Estimate the quantities of the following items of the building shown in Fig-1 :

(i) Internal plastering to walls

(ii) Brick work in plinth wall

15. *(a)* Prepare detailed data for reinforced cement concrete 1 : 4 : 8 for 1 cu.m, unit-1 cu.m.

0.92 cu.m	HBG metal	₹3,225 per cu.m
0.46 cu.m	Sand	₹5,500 per cu.m
0.115 cu.m	Cement	₹11,000 per cu.m
0.20 Nos	Mason	₹550 per each per day
1.80 Nos	Man Mazdoor	₹500 per each per day
1.40 Nos	Woman Mazdoor	₹450 per each per day
Sundries		Lumpsum

(OR)

(b) Prepare detailed data for CM 1 : 6 in random rubble stone masonry for 1 cu.m unit-1 cu.m.

|	
1.10 cu.m - RR stone	₹1,775 per cu.m
0.34 cu.m - Cement mortar 1 : 6	₹9,000 per cu.m
1.80 Nos of Masons	₹750 per each per day
1.40 Nos of Man Mazdoor	₹650 per each per day
1.40 Nos of Woman Mazdoor	₹550 per each per day
Sundries	Lumpsum

PART—C   10×1=10

Instructions : (1) Question No.16 is compulsory.

(2) The question carries **ten** marks.

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.
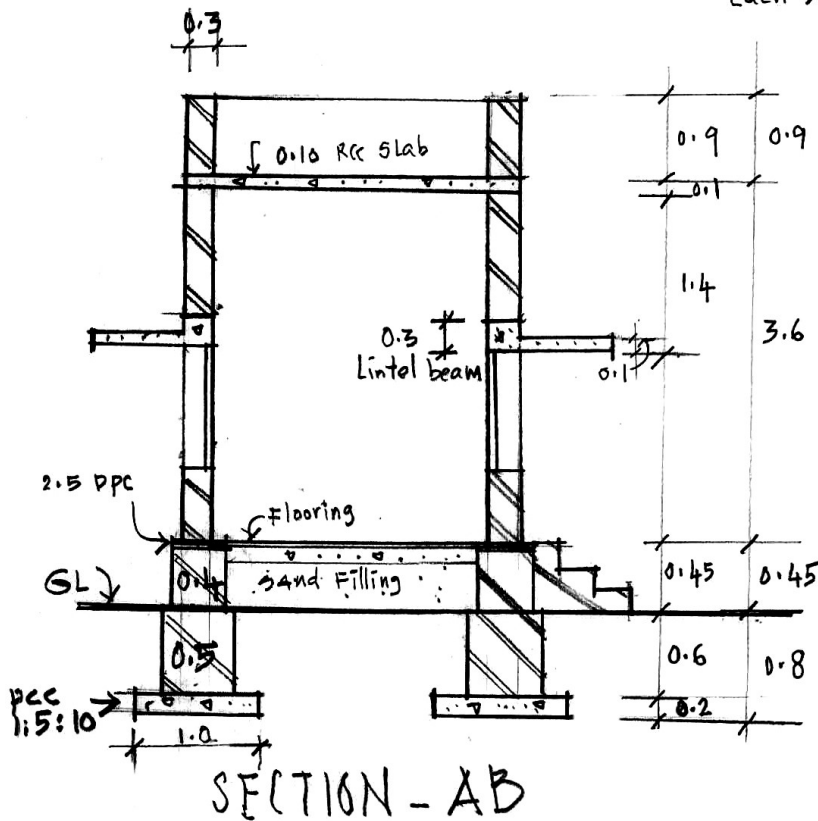
16. Calculate the net quantity of brickwork in CM 1 : 6 for superstructure including Parapet wall for the building shown in Fig-1.

FIG-1
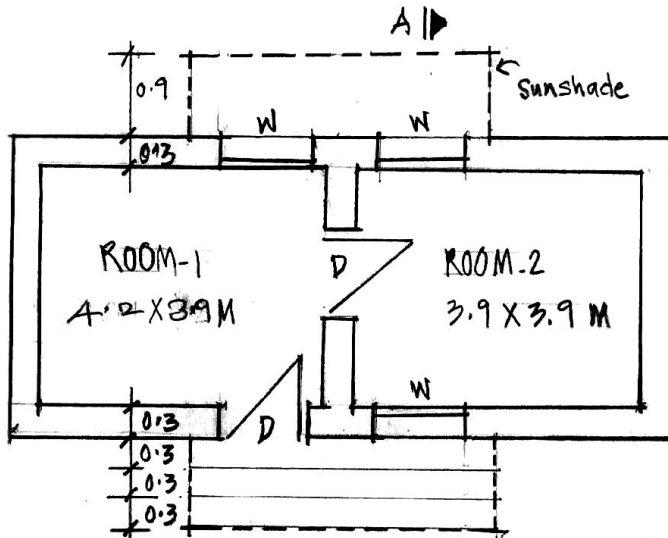
PLAN

- D- Panelled door-1.2×2.1 m
- W - 1.2×1.5M
- all dimensions in meters
- 0.3m Lintel beam bearing on each side over doors & windows

SECTION - AB