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18ENG74

Seventh Semester B.Arch. Degree Examination, Dec.2024/Jan.2025

Specification, Quantity and Costing of Buildings

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What do you mean by General specification and detailed specification? (08 Marks)
- b. What are the importance of Indian standard specifications? Discuss the objects of specifications. (12 Marks)

OR

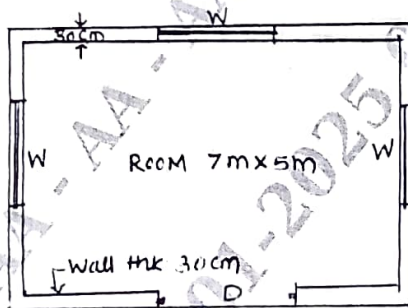
- 2 a. Write detailed technical specifications for providing and constructing burnt brick masonry and CM 1 : 6 for superstructure using table moulded bricks. (08 Marks)
- b. Explain the following : i) Detailed Estimate ii) Supplementary Estimate
iii) Revised Estimate. (12 Marks)

Module-2

- 3 a. Explain Bill of Quantities (BOQ). Give a typical sheet showing how BOQ is furnished. (08 Marks)
- b. Explain the following terms : i) Day work ii) Prime cost iii) Provisional sum. (12 Marks)

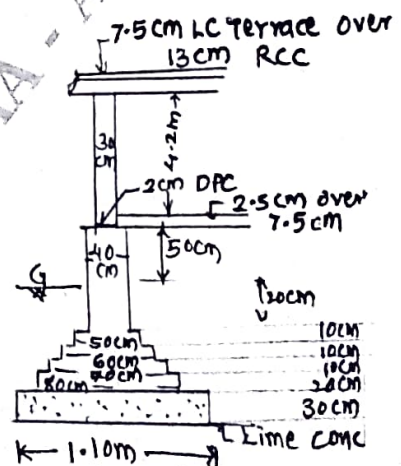
OR

- 4 Estimate the quantities of the following items of a single room building from Fig. Q4.



PLAN Fig. Q4

- a. Cement concrete in foundation.
 - b. Earthwork in excavation in foundation.
 - c. 2.5 cm DPC
 - d. SSM in CM 1 : 6 for foundation and plinth.
- Use long wall and short wall method.



Cross section of Wall Fig. Q4

(20 Marks)

Module-3

- 5 a. Explain i) Analysis of Rates ii) Overhead costs. (08 Marks)
- b. Workout from the 1st principles rate analysis for RCC roof slab 1 : 2 : 4. (12 Marks)

OR

- 6 The basic cost of material is Rs 250/bag of cement, Fine aggregate is Rs 500/m³, 20mm aggregate CA – Rs 720/m³, Brick (table moulded) Rs 13/No. Prepare detailed rate analysis from 1st principles for :
- P/L PCC 1 : 2 : 4 for foundation plinth as DPC using 20mm down size coarse aggregate. (10 Marks)
 - P/L PCC 1 : 1, 5 : 3 for Roof slab using 20mm and down size coarse aggregate. (10 Marks)

Module-4

- 7 Fig. Q7 shows details of 2 room building. Prepare detailed estimate for
- Centre line calculations.
 - Earthwork excavation for foundation in hard soil.
 - I class Brick work in superstructure.
 - PCC in CM 1 : 4.

(20 Marks)

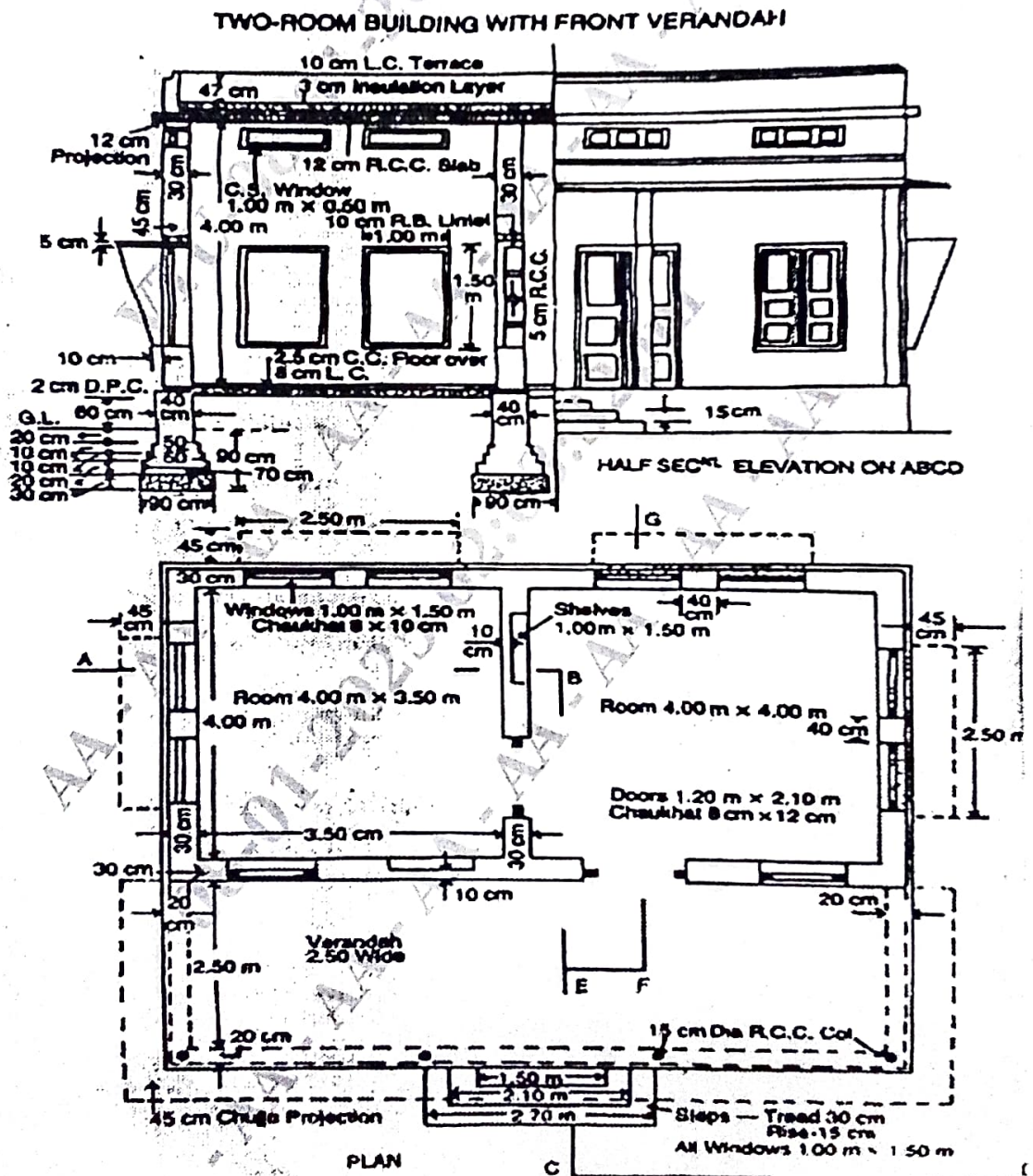
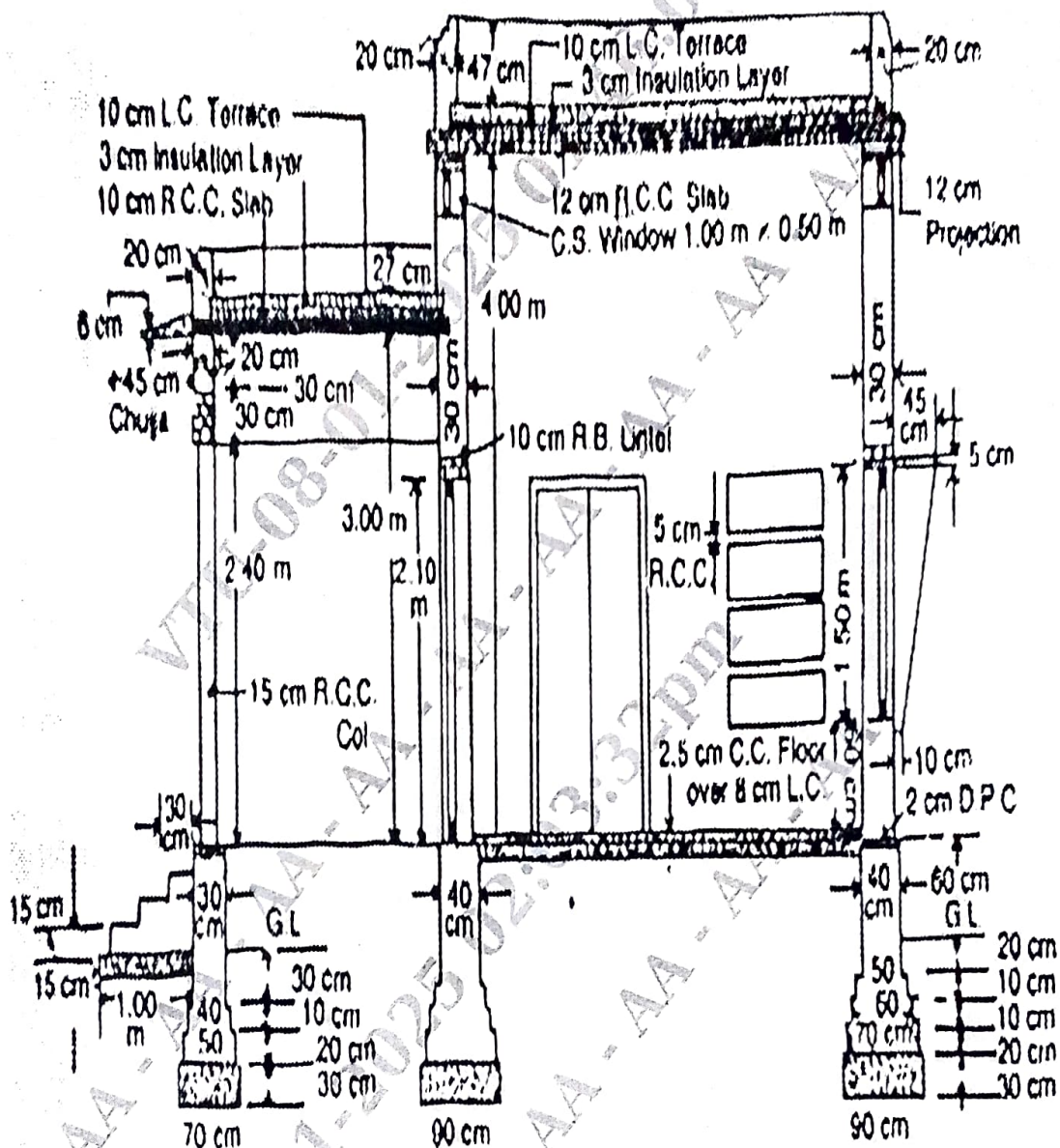


Fig. Q7

CROSS-SECTION OF TWO-ROOMED BUILDING



SEC^A ELEVATION ON CEFU

Fig. Q7

OR

- 8 a. Explain term "Project". What do you understand about complete estimate of a project? (10 Marks)
- b. Explain : i) Preliminary Estimate ii) Impact of delay in project on costing. (10 Marks)

Module-5

- 9 Prepare a detailed estimate of a septic tank with soak – pit for 50 users together with sanitary fittings of one seat of latrine as shown in Fig. Q9 for the following items of works.
- Earth work in excavation.
 - First class brick work in septic tank.
 - 12mm thick plastering for walls using CM 1 : 6 (inner surface).
- (20 Marks)

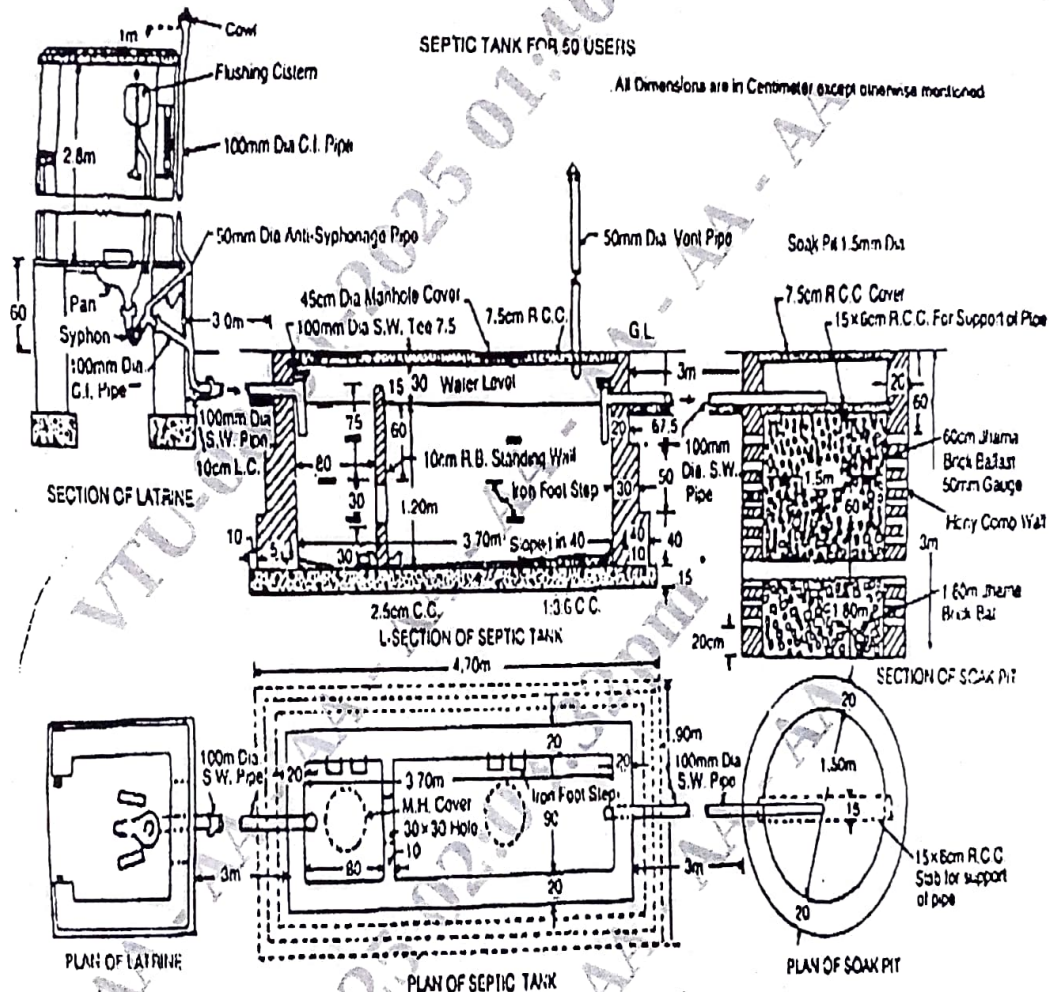


Fig. Q9

OR

- 10 a. Explain Role of Architects in monitoring specifications follow up for quality control. (10 Marks)
- b. Explain :
- Measurement Book (MB)
 - RA Bills
 - Interim and final checking
 - Certification of works on site based on the BOQ and terms of contract. (10 Marks)
