CBCS SCHEME

USN | | | | | | | | | | |

18ARC/ENG74

Seventh Semester B.Arch. Degree Examination, Dec.2025/Jan.2026
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 is an Estimate? Why are estimates prepared for a Building Project? **(08 Marks)**

b. Explain the following :
i) Detailed Estimate ii) Supplementary Estimate iii) Revised Estimate **(12 Marks)**

OR

2 Write detailed technical specification for the following :
a. Earthwork excavation for foundation **(06 Marks)**
b. 12mm thick cement plastering 1:6 on new Brick-work **(07 Marks)**
c. R.C.C work (1:2:4) **(07 Marks)**

Module-2

3 a. Define : i) Administrative and Technical Sanction ii) Security retention and EMD **(04 Marks)**

b. Write a note on tender document and its content. **(06 Marks)**
c. What is a Contract? What are the different types of contract? **(10 Marks)**

OR

4 a. Explain any four standard tests on materials conducted to check the quality and also their inclusion in the specifications. **(10 Marks)**

b. Write a note on material safety and workers safety considered during any construction work. Explain their consideration in specification. **(10 Marks)**

Module-3

5 Carryout rate analysis for the following items from first principles :
a. R.C.C work 1:1.5:3 with 2% steel. **(08 Marks)**
b. 12mm thick cement plastering in CM 1: 6. **(06 Marks)**
c. Cement concrete flooring 75mm thick 1:4:8. **(06 Marks)**

OR

6 a. What is Rate Analysis? How is Rate analysed from the 1st principles? Explain briefly. **(10 Marks)**

b. Prepare the rate for burnt brick masonary in CM 1: 4 in superstructure. **(10 Marks)**

Module-4

7 Refer Fig Q7 using short wall - long wall method :
a. Calculate the quantity of SSM in CM 1 : 6. **(10 Marks)**
b. Calculate the quantity of Brick masonary in CM 1 : 6 for superstructure. **(10 Marks)**

OR

8 Refer Fig. Q7. Using short wall – long wall method.

a. Calculate the quantity of earthwork in excavation for foundation. **(07 Marks)**

b. Calculate the quantity of P.C.C 1:4:8 for foundation. **(06 Marks)**

c. Calculate the quantity of D.P.C. **(07 Marks)**

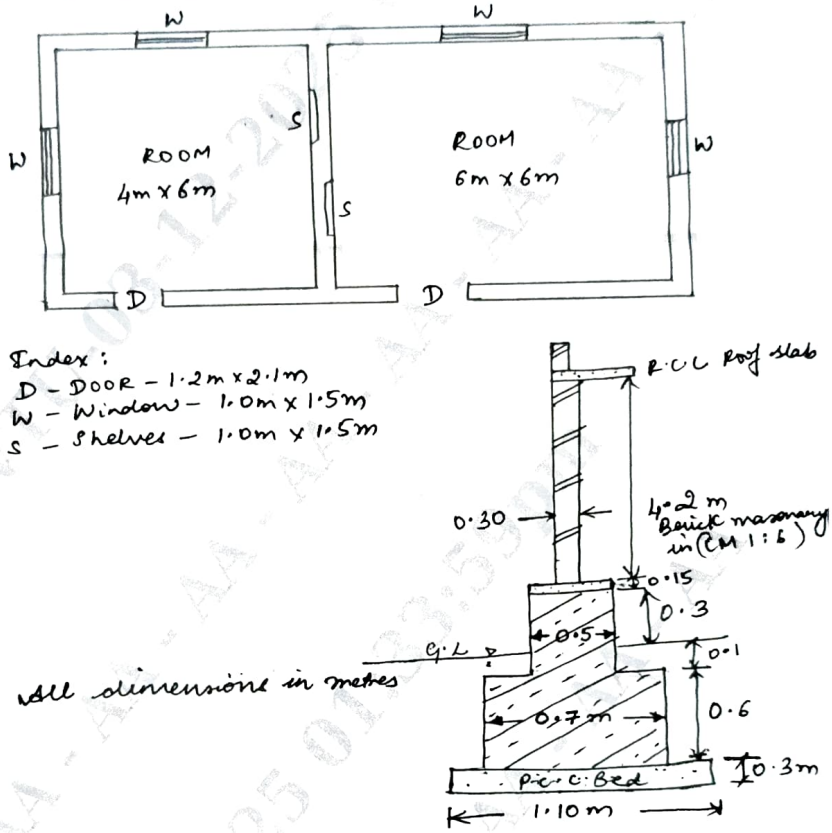

Fig. Q7

Module-5

9 Estimate the quantities of earthwork for the portion of a road for 300m length from the following data. Formation width is 10m , side slopes in banking is 2:1 and side slopes in cutting is 1.5 : 1.

Distance	0	30	60	90	120	150	180	210	240	270	300
R.L of ground	101	100.9	100.5	100.1	100.8	100.6	100	99.8	99.2	99.1	98.5

The formation level of 1st chainage is 102.0. The road is in downward gradient of 1 in 150 upto distance of 120m. Afterward gradient changes to 1 in 100. **(20 Marks)**

OR

10 The details of septic tank is given in Fig Q10. Find the quantities for the following :

a. Earthwork in excavation **(05 Marks)**

b. BBM in CM 1:4 **(05 Marks)**

c. 12mm thick cement plaster for walls and flooring **(05 Marks)**

d. R.C.C 1:2:4 for cover slab **(05 Marks)**

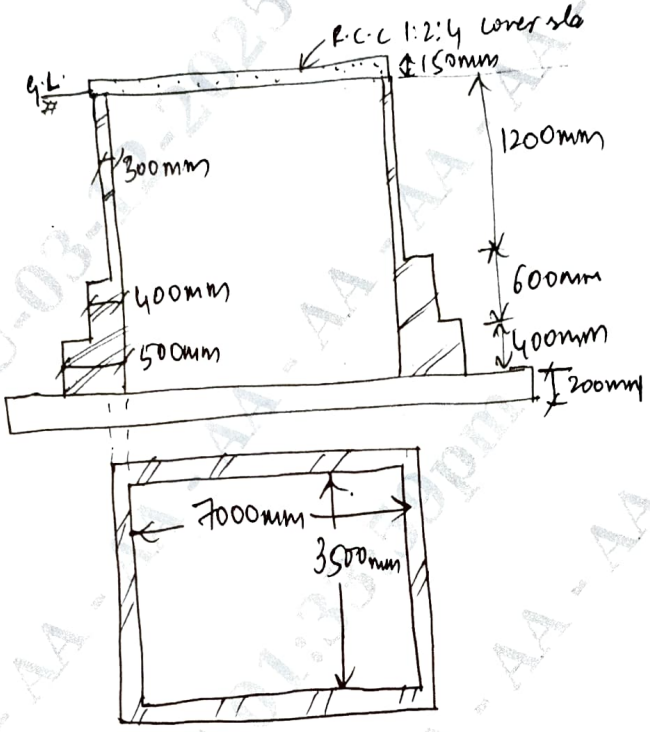

Fig. Q10

* * * * *