

# CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

18ENG74

## Seventh Semester B.Arch. Degree Examination, June/July 2024 Specification, Quantity and Costing of Buildings

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. Assume any missing data suitably.

### Module-1

- 1 a. What is an Estimate? Why are estimates prepared in 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. What is a contract? What are the different types of contract? (10 Marks)  
b. Write a note on tender document and its content. (06 Marks)  
c. Define : i) Administrative and Technical Sanction  
ii) Security retention and EMD (04 Marks)

OR

- 4 a. Write a note on material safety and workers safety considered during any construction work. Also explain their consideration in specification. (10 Marks)  
b. Explain any four standard tests on materials conducted to check the quality and also their inclusion in the specifications. (10 Marks)

### Module-3

- 5 a. What is Rate Analysis? How is Rate analysed from the 1<sup>st</sup> principles? Explain briefly. (10 Marks)  
b. Prepare the rate for burnt brick masonry in CM 1:4 in superstructure. (10 Marks)

OR

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

### Module-4

- 7 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)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8=50, will be treated as malpractice.

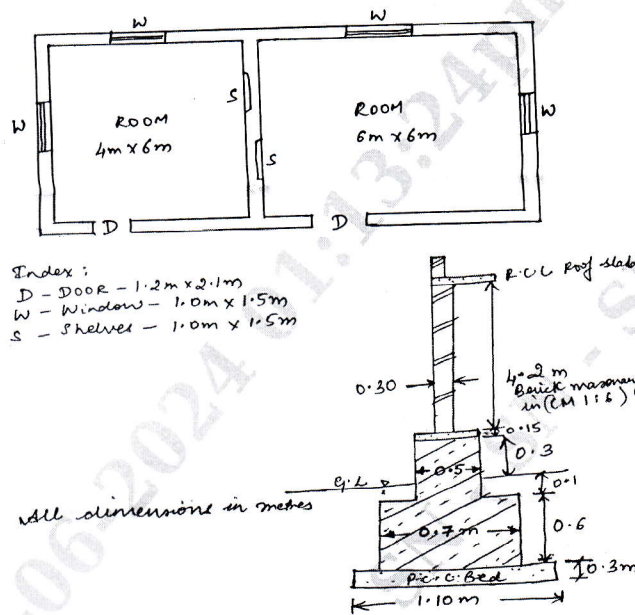


Fig Q7

OR

- 8 Refer Fig. Q7 . Using short wall – long wall method.
- Calculate quantity of SSM in CM 1:6 (10 Marks)
  - Calculate quantity of Brick masonry in CM 1:6 for superstructure. (10 Marks)

**Module-5**

- 9 Determine the quantities of earthwork for the portion of a road between chainages 0 to 10 from the following data, lengths being measured with a standard 20m chain.

Chainages	0	1	2	3	4	5	6	7	8	9	10
G.L above Datum	231.1	231.2	230.9	231.2	230.8	230.7	230.6	230.4	229.1	229.5	229.7

The formation level @ 0 chainage is 230.0 and the road is in rising gradient of 1 in 200. The width of formation is 8m and side slopes 1.5:1 in banking and 1:1 in cutting. (20 Marks)

OR

- 10 The details of septic tank are given in Fig Q10. Find the quantities for the following work.

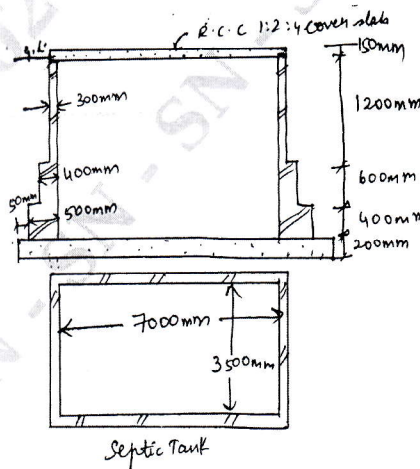


Fig Q10

- Earthwork in excavation (05 Marks)
- BBM in CM 1:4 (05 Marks)
- 12mm thick cement plaster for walls and flooring (05 Marks)
- R.C.C 1:2:4 for cover slab (05 Marks)