

Reg. No. :

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**Question Paper Code: U7102**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Seventh Semester

21UCE702- ESTIMATING AND COSTING

Civil Engineering

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

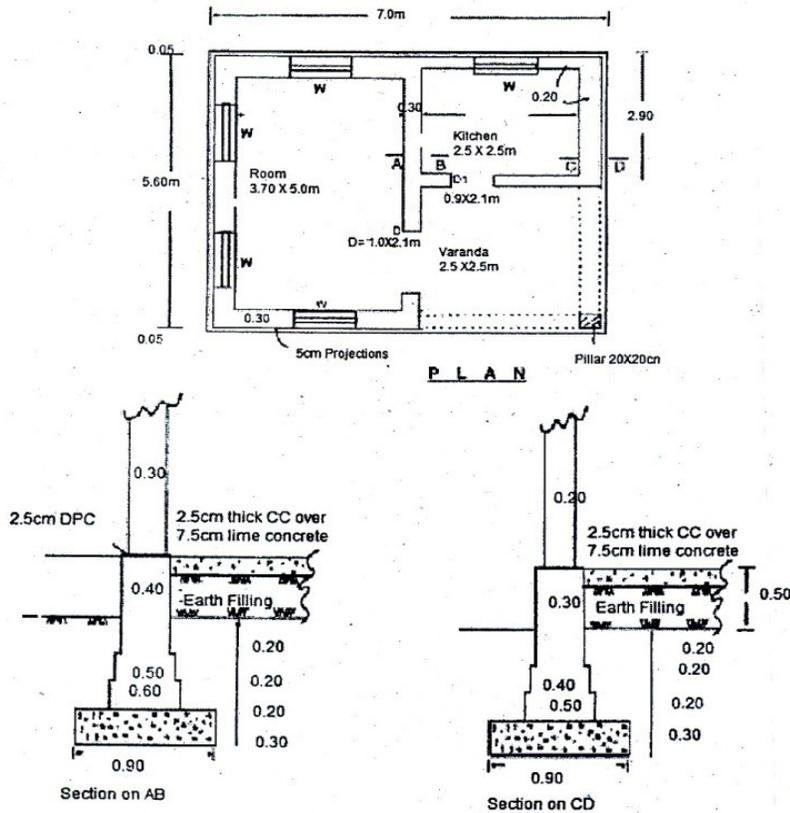
Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

- |   |         |
|---|---------|
| 1. State the unit of measurements for earth work, D.P.C and brick Work.   | CO2 App |
| 2. What are the methods of taking out estimates?                          | CO1 U   |
| 3. State the importance of rate analysis.                                 | CO2 App |
| 4. What are the methods of measurements of earthwork?                     | CO1 U   |
| 5. Define a tender.   | CO1 U   |
| 6. Differentiate between detailed specification and general specification | CO2 App |
| 7. Write the essentials requirements of contract.                         | CO1 U   |
| 8. What information's should a contract document contain?                 | CO2 App |
| 9. Define sinking fund.   | CO1 U   |
| 10. Define the Capitalized value.   | CO1 U   |

PART – B (5 x 16= 80 Marks)

11. (a) Prepare a detailed estimate for Two roomed building shown in fig CO2-App (16)  
1 by Centre line method. The quantities to be estimated are,  
1. Earthwork excavation in foundation.  
2. Lime concrete in foundation 1:7:20.  
3. Ist class brickwork in 1:6 cement sand mortar in foundation and up to plinth.



Or

- (b) Prepare an approximate estimate of building project with total CO2-App (16)  
 plinth area of all building is 80 sqm. and from following data.

- Plinth area rate Rs. 40000 per sqm
- Cost of water supply @7½% of cost of building.
- Cost of Sanitary and Electrical installations each @ 7½% of cost of building.
- Cost of architectural features @1% of building cost.
- Cost of roads and lawns @5% of building cost.
- Cost of P.S. and contingencies @4% of building cost.

Determine the total cost of building project.

12. (a) Estimate the rate analysis for 7.5cm thick lime concrete in floor CO2-App (16)  
 including water charges and contract's profit

Or

- (b) Prepare a rate analysis of material and labour including water CO2- App (16)  
 charges and contractors profit for I-Class Brickwork in superstructure with 20x10x10cm brick with cement sand mortar 1:6.

13. (a) Prepare a detailed specification of lime concrete in foundation. CO5- Ana (16)  
Or  
(b) Prepare a report to accompany an estimate for a residential to executive engineer. CO5- Ana (16)
14. (a) Elaborate the requirements and termination of arbitration agreement CO4- App (16)  
Or  
(b) Identify the arbitral disputes and non-arbitral disputes CO4- App (16)
15. (a) Work out the standard rent for a residential house purchased on the ownership basis from the following data: CO5- Ana (16)  
Cost of land paid to society : Rs2,00,000  
Cost of superstructure : Rs 7,00,000  
Amount paid for additional work : Rs 1,00,000  
Society service charges per month Rs 500  
Period of completion of project: 2 years  
Assume interest on idle capital of Rs8,00,000 for half the construction period at 8%. Assume 7% return on value of land and 8% return on total cost of construction. Assume annual repairs at 0.25% on cost of construction including additional work. Insurance charges at 0.1% on cost of construction including additional work. Sinking fund at 3.5% for a life period of the structure of 60years. Municipal taxes and rent collection charges at 30% the gross rent.  
Or  
(b) Examine in detail about various methods of calculations Depreciation. CO4- App (16)

