R22 Regulation *Subject code: 4E7AA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Regular Examinations, November 2025

ESTIMATION & COSTING

Maximum Marks: 60 Date: 24.11.2025 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

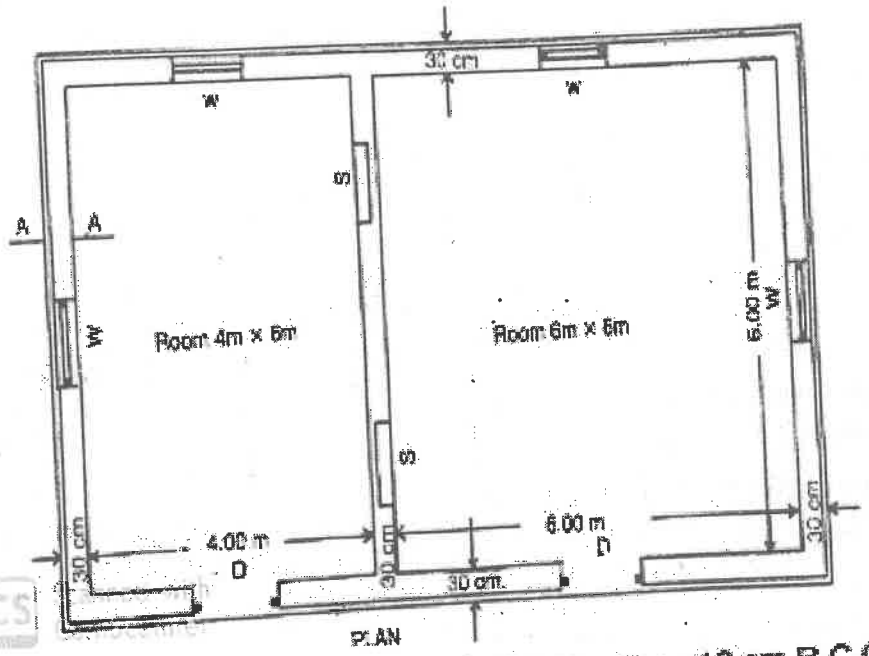
Part-A

	All the following questions carry equal marks (10X1M=10 Marks)	Marks	CO	BloomTx
1.a)	Define "Approximate Estimate."	1M	CO1	L1
b)	What is meant by "Plinth Area"?	1M	CO1	L1
c)	List the data required for preparing an estimate.	1M	CO2	L1
d)	Write the formula for calculating earthwork in road formation.	1M	CO2	L1
e)	Define "Specification."	1M	CO3	L1
f)	What is a "Non-schedule Item"?	1M	CO3	L1
g)	Define "Overhead Charges."	1M	CO4	L1
h)	What is a "Bar Bending Schedule"?	1M	CO4	L1
i)	Define "Sinking Fund."	1M	CO5	L1
j)	What is the "Rental Method of Valuation"?	1M	CO5	L1

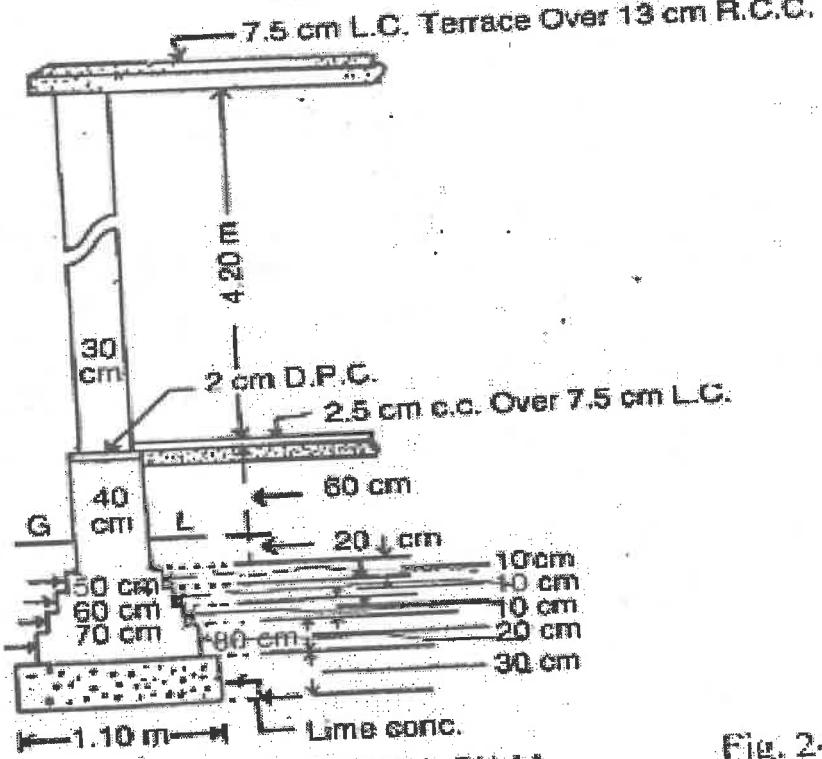
Part-B

	Answer All the following questions. (5X10M=50Marks)	Marks	CO	BloomTx
2	Estimate the quantities of the following items of a two roomed building from the given plan and section. a) Earthwork in excavation in foundation. b) Lime concrete in foundation. c) 1 st class brick work in cement mortar 1:6 in foundation and plinth. d) 2.5 cm c.c damp proof course, and e) 1 st class brick work in lime mortar in super structure.	10M	CO1	L4

TWO ROOMED BUILDING



PLAN



CROSS SECTION OF WALL ON AA.

Fig. 2-(

	OR			
3	a) Define and explain technical terms used in estimate preparation. b) Write a short specification report on an estimate for a two-room residential building.	5M 5M	CO1	L2

4	Prepare a detailed estimate for earthwork for apportion of a road from the following data **Dist in m**: 0, 100, 200, 300, 400, 500, 600, 700, 800 **R.L of ground**: 114.50, 114.75, 115.25, 115.20, 116.10, 116.85, 118.00, 118.25, 118.10 R. L of formation at 0 station is 115, 0 to 400 upward gradient in 1 in 200, 500 to 800 downward gradient in 1 in 100. Formation width of road is 10-meter side slope 2:1 in banking & 1 1/2: 1 in cutting. Adopt suitable rates.	10M	CO2	L3
	OR			
5	(a) Describe the procedure for preparing a detailed estimate for a residential building. (b) Write the steps for estimation of quantities for water supply and sanitary works.	5M 5M	CO2	L3
6	a) Explain the term Task or out-turn work in detail b) Briefly explain about overhead costs in Detail	5M 5M	CO3	L2
	OR			
7	a) Describe the procedure for rate analysis and explain lead, lift, and overhead charges. b) Determine the rate analysis for 10 m^3 of brick masonry (1:6) given the rates of materials and labour.	5M 5M	CO3	L3
8	a) Define contract? Explain types of contracts? b) Explain contract documents and conditions of contracts?	5M 5M	CO4	L2
	OR			
9	a) Explain the methods of measurement of civil engineering works as per IS:1200. b) Write short notes on: (i) Bar Bending Schedule for columns (ii) Preparation of work bills and measurement books.	5M 3M 2M	CO4	L3
10	a) Explain valuation of buildings? And purposes of valuation? b) What is specification? Write general specification of a 1st class building?	5M 5M	CO5	L2
	OR			
11	Describe the term Depreciation and method of calculating depreciation.	10M	CO5	L3