R22 Regulation *Subject code: 4E7AA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Supplementary Examinations, May 2026

ESTIMATION & COSTING

(CE)

Maximum Marks: 60 Date:05.05.2026 Duration: 3 hours

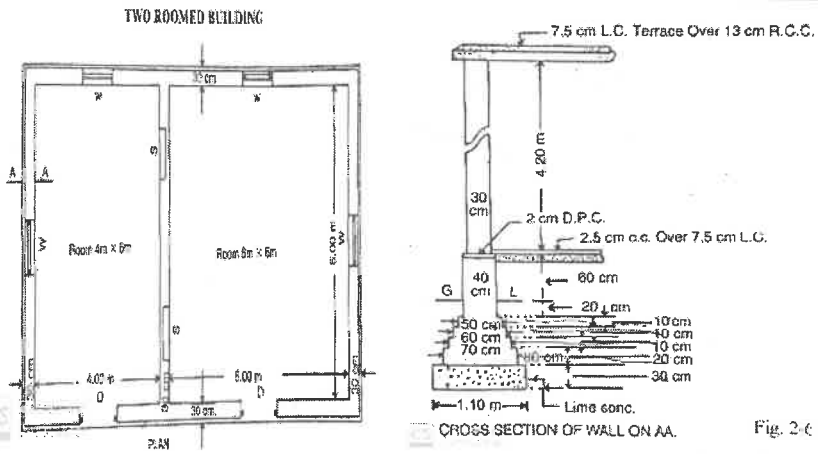
Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

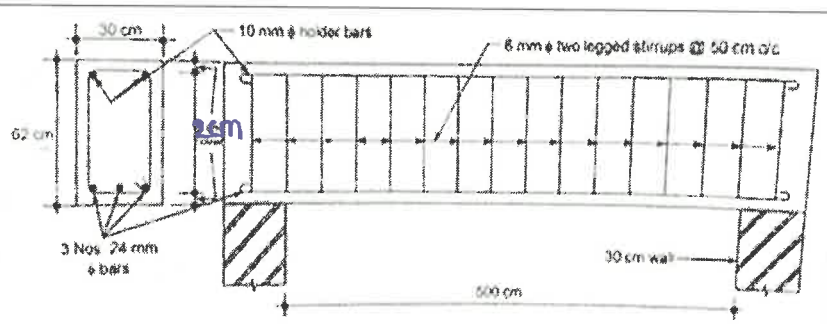
Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	BTL
1.a)	Define "Estimate".	1M	CO1	L1
b)	List the elements of an estimate.	1M	CO1	L1
c)	Write two methods of approximate estimation.	1M	CO2	L1
d)	Define "Schedule item" and "Non-schedule item".	1M	CO2	L1
e)	Write two technical terms used in estimate preparation.	1M	CO3	L1
f)	Define "Specification" and its purpose.	1M	CO3	L1
g)	What is meant by "Lead Statement"?	1M	CO4	L1
h)	Define "Depreciation".	1M	CO4	L1
i)	Write any two types of contracts.	1M	CO5	L1
j)	What is meant by "Salvage Value" in valuation?	1M	CO5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
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

	 Fig. 2.6			
	OR			
3	(a) Explain the methods of estimating used in building construction with examples. (b) A proposed office building has a plinth area of 480 m². Calculate the approximate cost using the cubic content method. Assume height = 3.3 m, rate = ₹6,200 per m³.	7M 3M	CO1	L3
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 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) Explain the objectives and importance of specifications in construction. (b) Write standard specifications for brick masonry in cement mortar (1:6) and plastering in cement mortar (1:4)	5M 5M	CO2	L3
6	Determine the below figure shows the longitudinal section and cross section of a simple beam of clear span 5m. the thickness of the supporting wall is 30 cm. work out the total quantity of the reinforcement in the beam	10M	CO3	L4

				
	OR			
7	(a) Explain the importance of specifications and write the standard specifications for flooring work. (b) Write the language rules to be followed while drafting specifications.	5M 5M	CO3	L2
8	(a) What is a bar bending schedule (BBS)? Illustrate the BBS for a simply supported beam with example data. (b) Write about methods of measurement and IS Code provisions for RCC works.	5M 5M	CO4	L2
	OR			
9	Explain the term Contract and explain the various conditions to be incorporated in any contract in detail.	10M	CO4	L2
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	Explain the terms of a) Scrap value b) Annuity c) Capitalized value in detail	10M	CO5	L2