R20 Regulation *Subject code: 3P7AA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Supplementary Examinations, May 2026

ESTIMATION AND COSTING

(CE)

Maximum Marks: 70 Date: 05.05.2026 Duration: 3 hours

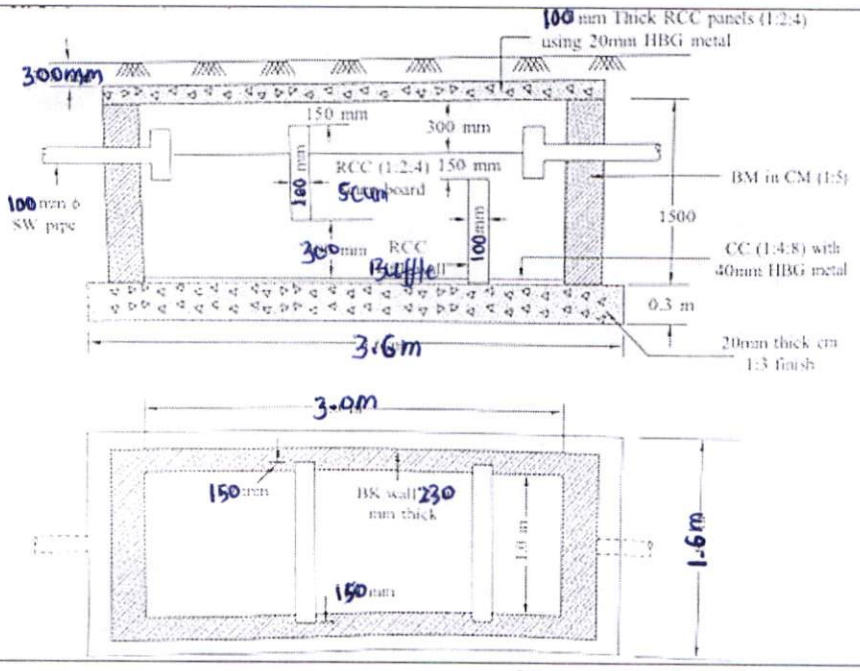
Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

	All the following questions carry equal marks (10X2M=20 Marks)	Marks	CO	BTL
1	What is an Estimate?	2M	1	L1
2	Write the units of measurement for Cement Concrete & Plastering.	2M	1	L1
3	Define specification.	2M	2	L1
4	What is Analysis of Rates?	2M	2	L1
5	List out the methods of detailed estimate.	2M	3	L1
6	What is Lead in earthwork calculations?	2M	3	L1
7	Write the unit weight of 25mm dia steel bar.	2M	4	L1
8	Define revised estimate.	2M	4	L1
9	What is Free hold property?	2M	5	L1
10	What is Gross income?	2M	5	L1

Part-B

	Answer All the following questions. (5X10M=50Marks)	Marks	CO	BTL
11	Explain different methods of approximate estimates in detail.	10M	1	L2
	OR			
12	Prepare an approximate estimate of building project with total plinth area of all building is 500 sq.m and from following data. a. Plinth area rate Rs. 3500 per sq.m b. Cost of water supply @7½ % of cost of building. c. Cost of Sanitary and Electrical installations each @ 7½% of cost of building. d. Cost of architectural features @ 2% of building cost. e. Cost of roads and lawns @ 5% of building cost. Cost of P.S. and contingencies @ 3% of building cost. Determine the total cost of building project.	10M	1	L2
13	Prepare a detailed estimate for the following items of septic tank fig. given below a. Earthwork Excavation b. Brick Masonry in CM (1:6) c. RCC (1:2:4) with 20mm HBG metal for top cover slab	10M	2	L2



	OR			
14	The road has the following data Chainage in 'm': 0 | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 Ground level in 'm': 30.8 | 31.25 | 31.85 | 32.25 | 33.0 | 33.65 | 34.5 | 34.82 | 35.5 The formation level at chainage Zero is 32.00m and having a rising gradient of 1 in 120. The top width is 10m and side slopes 2:1. Assuming the transverse slope of the ground is level. Calculate the volume of earthwork by Prismoidal Rule.	10M	2	L2
15	Explain detailed specifications of earthwork in excavation	10M	3	L2
	OR			
16	Prepare analysis of rates for the following items of work. a. 1st class brick work of 1:3 cement mortar – unit 1 cu.m b. Cement concrete 1:4:8 –unit 1 cu.m Assume materials and labours in the market rate.	5M 5M	3	L2
17	Estimate the quantity of steel for any type of RCC Simply supported beam with an illustrative example and prepare a bar bending schedule.	10M	4	L2
	OR			
18	Explain in short the various points to be observed in recording measurements of works in Measurement Book.	10M	4	L2
19	What is Gross income, Net income and outgoings? Explain in detail about various types of outgoings?	10M	5	L2
	OR			
20	A residential building constructed 12 years ago is situated on a plot whose total area is 400m^2. The plinth area of the building is 240m^2. The present cost of construction of the building is Rs.1,30,000/- and the cost of the land is Rs.80/- per m^2. The rate of depreciation for the value of the building is 1%. Calculate the total value of our property.	10M	5	L2