



R20 Regulation

Subject code: 3P7AA

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Supplementary Examinations, November 2025

## ESTIMATION AND COSTING

(CE)

Maximum Marks: 70

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 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	Define approximate estimate?	2M	1	L1
2	Write any two uses of estimation?	2M	1	L1
3	What is the need of 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	What is the hook allowance and bent up allowance in beam reinforcement?	2M	4	L1
8	Write is measurement book?	2M	4	L1
9	Write any four methods of valuation	2M	5	L1
10	State methods of calculating depreciation	2M	5	L1

### Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Explain the different methods of working out quantities in detailed estimates?	10M	1	L2
OR				
12	What is an estimate? What is the data required for preparation of estimates, explain in detail?	10M	1	L2
13	Prepare a detailed estimate for the following items of work for a slab culvert shown in fig. below: a. Earthwork excavation for foundations b. CC (1:4:8) using 40mm HBG metal for foundation bed c. RCC (1:2:4) for deck slab	10M	2	L2

OR				
14	<p>The formation width of road embankment is 9.0m. The side slopes are 2.5:1. The depths along the center line of road at 50.0m intervals are 1.2,1.1,1.4,1.2,0.9,1.5 and 1.0m.It is required to calculate the quantity of earthwork by</p> <p>a.Prismoidal rule                      b.      Trapezoidal rule</p>	5M  5M	2	L2
15	<p>Explain detailed specifications of earthwork in excavation</p>	10M	3	L2
OR				
16	<p>Prepare analysis of rates for the following items of work.</p> <p>a. 1<sup>st</sup> class brick work of 1:3 cement mortar – unit 1 cu.m</p> <p>b. Cement concrete 1:4:8 –unit 1 cu.m</p> <p>Assume materials and labours in the market rate</p>	5M  5M	3	L2
17	<p>Estimate the quantity of steel for any type of RCC Simply supported beam with an illustrative example and prepare a bar bending schedule.</p>	10M	4	L2
OR				
18	<p>Explain in short the various points to be observed in recording measurements of works in Measurement Book?</p>	10M	4	L2
19	<p>What is Gross income, Net income and outgoings? Explain in detail about various types of outgoings?</p>	10M	5	L2
OR				
20	<p>A residential building of 220 sq.m plinth area is situated on a plot measuring 450 sq.m. The building is let out for a rent of Rs. 6,000 per month. The cost of the land is Rs.3,000 per sq.m. The usual outgoings are estimated as 20% of gross rent. Find the capitalized value of the property for 10% net yield, assuming life of the building as 70 years.</p>	10M	5	L2