



B.Tech VII Semester Regular Examinations, November 2023

ESTIMATION & COSTING
(CIVIL ENGINEERING)

Maximum Marks: 70

Date:11.12.2023 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 which carries 10M.
 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)

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1	What are the principles for working out quantities of detailed Estimates?	L1
2	List out limits of measurement and degrees of accuracy in estimating.	L1
3	Define lead and lift in earthwork estimation	L1
4	Which method is more accurate for calculation of earthwork and why?	L1
5	What is meant by Rate Analysis? Mention its importance?	L1
6	What are the different overhead charges in rate analysis?	L1
7	Mention the Difference between Earnest Money Deposit (EMD) and Security Deposit	L1
8	Define tender.	L1
9	What are the different purposes for which the valuation is undertaken?	L1
10	What is meant by depreciation?	L1

Part-B

Answer All the following questions.

(5X10M=50Marks)

11	A. Enumerate the different Methods of Building Estimates and explain them. [5] B. Discuss various approximate method of estimating. [5]	L1 L1
OR		
12	Explain the earthwork in excavation in foundations of buildings by a) Long wall – Short wall method. [5] b) Centre line method [5]	L1
13	A. State any three methods of calculation of earth work for road. Explain any one of them. [5] B. Explain how to estimate the earthwork in canals for the following cases of canal c/s a) Fully in excavation [3] b) Fully in embankment [2]	L2 L1
OR		
14	Calculate the quantity of each work for 200m length for a portion of a road in an uniform ground the heights of bank at the two ends being 1.00m and 1.60m. The formation width is 1.0 m and side slopes 2:1 (H:V). Assume that there is no transverse slope. Use the Mean - sectional area method. [10]	L3

15	A. Write the detailed specifications for damp proof course (2.5cmthick) of C.C 1:1.5:3 [5] B. Discuss schedule of rates and preparation of data sheets. [5]	L1
OR		
16	A. Write the specifications for earth work excavation in a residential building. [5] B. Explain where and how the rate analysis is used for estimation of cost of the work and also mention the factors affecting rate of an item of work? [5]	L2 L2
17	A. What are the different types of contracts? Explain them briefly with their merits and demerits.[5] B. Describe different types of penalties imposed on a contract and why such penalties are imposed. [5]	L1 L1
OR		
18	Calculate the quantity of steel reinforcement required for a roof slab of 3 m x 6 m and fully resting over a wall of 300 mm thick on all sides. [10] Details of reinforcement: (i) 10 mm diameter main bars are provided in shorter span direction at 150 mm c/c. Alternative bars are bent up near the support and all bars are hooked at both ends. (ii) 8 mm diameter distribution bars are provided in longer span direction at 200 mm c/c. To hold the bent up bars in position 3 no's distribution bars are provided on each side at top. (iii) Cover: Bottom and top cover to reinforcement taken as 15 mm and end cover of 25 mm is provided.	L3
19	A. Explain the method of valuation of a building along with an example by valuation based on profit. [5] B. Explain different methods of depreciation. [5]	L2 L1
OR		
20	A building is situated by the side of a main road of Mumbai city on a land of 600 sq.m. The built-up portion is 25m x 30m. The building is first class type and provided with water supply, sanitary and electric fittings, and the age of the building is 30 years. Work out the valuation of the property. Assume plinth area rate is Rs.400.00 and cost of land as Rs.7000 per sq.m. [10]	L3