

IV B. TECH I SEMESTER REGULAR EXAMINATIONS, NOVEMBER - 2023
ESTIMATION, SPECIFICATIONS AND CONTRACTS
(CIVIL ENGINEERING)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer any THREE questions from Part-A
Part-B is compulsory

PART-A (3x14=42 Marks)

1. a) How do you estimate unit quantities required for the [7M]
 - (i) Brickwork with standard bricks and
 - (ii) Cement Mortar for the rate analysis purposes?
- b) What is the detailed estimate of an item? Explain the two stages [7M] that contribute to prepare a detailed estimate.
2. Prepare the general unit rates for the following items with HBG metal - [14M]

Rs.780; sand - Rs.290; Cement - Rs.3000; Mason Ist Class - Rs.250; Man Mazdoor - Rs.150; Women Mazdoor - Rs.100; Centering charges - Rs.450. Assume any other data suitably.

 - (i) Cement Concrete in Foundation (1:5:10)
 - (ii) P. C. C (1:2:4)
 - (ii) V. R. C. C (1:2:4) for bed blocks, column footings including form work centering charges.
3. a) Explain the steps involved in estimating the earthwork for canals [7M] along with the applicable equations.
- b) The Formation level at chainage zero is 35 and having the rising [7M] gradient of 1 in 100 the top width is 10m and the side slopes are 1.5H to 1V. Assuming transverse slope is level. Calculate the volume of earthwork with the following data:

Chainage	0	10	20	30	40	50	60	70
RL	25	25.5	26.5	27.0	27.9	27.2	28.3	29.0

4. a) What is meant by Valuation? Discuss in detail the necessity of [7M] Valuation.
- b) Write various contract conditions while issuing a contract. [7M]

5. With an example, estimate the quantity of reinforcement for a [14M]
rectangular beam and also prepare BBS.
6. a) What do you understand by Contract specification? Explain the [7M]
term with any suitable example.
- b) A building situated on a land of 600sq.m, has a built up portion of [7M]
17m x 13m. 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.

PART-B (1x28=28 Marks)

7. The section of steps at the front of a residential building is shown in [28M]
figure. Calculate
 - (i) Volume of BM in CM (1:5) for all steps
 - (ii) Plastering with CM (1:4) for all steps


