

**R15**

Code No: 127DE

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year I Semester Examinations, November/December - 2018**

**ESTIMATING AND COSTING**

(Common to CE, CEE)

Max. Marks: 75

Time: 3 Hours

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit.

Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

(25 Marks)

- 1.a) What are the main items of work? [2]
- b) What are the main methods of building estimate? [3]
- c) What is lead in earthwork of canal works? [2]
- d) What is the area of side sloping surface (s) on both sides of road having length (L)? [3]
- e) What is a work over head charge? [2]
- f) What is significance of standard schedule of rates? [3]
- g) What is length of main straight bar in a beam? [2]
- h) Explain item rate contract. [3]
- i) What is capitalized value? [2]
- j) What is difference between second class brickwork and third class brick work? [3]

**PART-B**

(50 Marks)

2. Estimate quantities for a medium income group house (MIG) using centre line method  
a) earthwork in excavation b) lime concrete in foundation c) 1<sup>st</sup> class brickwork in superstructure d) plastering. Assume suitable data. [10]

OR

3. Explain in detail about approximate methods of estimating. [10]

4. Prepare a detailed estimate for earth work for a portion of a road from the following data. The formation level at starting point is 119m. Formation width of road is 7.5m and side slopes of banking are 2:1. The road is in downward gradient of 1 in 160 up to 180m and then the gradient changes to 1 in 120 downward. [10]

Distance in m	0	30	60	90	120	150	180	210	240	270	300
R. L. of Ground	115.5	116.75	117.25	118.20	116.10	116.25	117.25	118.30	118.10	117.80	117.25

OR

5. Explain estimation of earthwork in irrigation channels for different cases in a detailed manner? [10]

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6. Prepare analysis of rates for the following item of work.  
12mm thick plastering of 1:6 cement mortar – unit 1 cu. m.  
Assume materials and labors at the market rate.

[10]

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7. Prepare analysis of rates for the following item of work.  
1<sup>st</sup> class brick work in superstructure of 1:3 lime cement mortar – unit 1 cu. m.  
Assume materials and labors at the market rate.

[10]

8. Estimate the quantity of steel for any type of RCC slab with an illustrative example and explain the importance of bar bending schedule?

[10]

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9. Explain process of tendering contract for public work.

[10]

10. Explain the following terms:

a) Scrap value.      b) Market value.      c) Book values.      d) Annuity.

[10]

OR

11. Explain detailed specifications of I<sup>st</sup> class in brickwork.

[10]

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