R13

Code No: 117DE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2016

ESTIMATING AND COSTING

(Common to CE, CEE)

Time: 3 Hours **Max. Marks: 75**

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 is the order of booking dimensions? [2]
b) What are the voluminous units of measurement? [3]
c) What is lift in earthwork calculations? [2]
d) What is volume of fully excavated trapezoidal cross section canal? [3]
e) What is a contingent charge? [2]
f) Write short notes on analysis of rate. [3]
g) What is unit weight of 16mm diameter steel bar? [2]
h) Explain lump sum contract. [3]
i) What is years purchase? [2]
j) What is difference between first class brickwork and second class brick work? [3]

PART-B

(50 Marks)

2. Estimate quantities for a Low income group house (LIG) using long wall and short wall method a) earthwork in excavation b) lime concrete in foundation c) 1st class brickwork in foundation d) plastering. Assume suitable data. [10]

OR

3. Explain in detail about all available estimates for a civil engineering structures. [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 120m. Formation width of road is 10m and side slopes of banking are 2:1. The road is in downward gradient of 1 in 150 up to 120m and then the gradient changes to 1 in 100 downward. [10]

Distance in m	0	30	60	90	120	150	180	210	240	270	300
R. L. of Ground	114.5	114.75	115.25	115.20	116.10	116.85	118.20	118.25	118.10	117.80	117.25

OR

5. Explain in detail about the three cases of canal sections with neat sketches. [10]

6. Prepare analysis of rates for the following item of work.
   1st class brick work in foundation of 1:3 cement mortar – unit 1 cu. m.
   Assume materials and labors in the market rate. [10]

OR

7. Prepare analysis of rates for the following item of work.
   Cement concrete in foundation 1:4:9 – unit 1 cu. m.
   Assume materials & labors in the market rate. [10]

8. Estimate the quantity of steel for any type of RCC beam with an illustrative example and explain the importance of bar bending schedule? [10]

OR

9. Explain in detail about contract document. [10]

10.a) Explain method of valuation based on profit with an illustrative example.
   b) Explain capitalized value of a building considering sinking fund. [5+5]

OR

11. Explain detailed specifications of Earthwork in excavation. [10]

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