Code No. 6395 / N

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) I – Semester (New) (Main) Examination, November 2013

Subject : Estimating and Specifications

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

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1. What are the basic requirements for estimating a building? 3
2. Explain plinth area method of estimation. 2
3. Explain the term contract. 3
4. What is work order? 2
5. Estimate the quantity of wood required for a door opening of 2.1m x 1.2m with a bearing of 10cm and shutters are having a 2.5cm thick and frame of 10cm x 7.5cm. 3
6. What are the units in which DPC and skirting of a floor measured? 2
7. Find out the proportions of various materials required to prepare a 1 cubic meter of 1 : 3 : 6 concrete. 3
8. Explain the use of earnest money. 2
9. What is bar bending schedule? 3
10. When do you know the actual cost of the project? 2

PART – B (5 x 10 = 50 Marks)

11. Estimate the following items from the fig.1 by using long wall and short wall method. 10
    i) Excavation of foundation
    ii) First class brick work from foundation
    iii) RCC work in lintels over the openings

12. Find out the steel required for the RCC structure shown in fig.2. 10

13.a) Explain the factors affecting analysis of rates. 4
b) Find out the brick work in foundation and plinth with 9” x 4 ½” x 3” (nominal size) with cement mortar 1 : 4. Cost of brick Rs.4.50/- sand 1200/- cum cement Rs.350/- per bag. The labour requirement per cum is Head Mason 1/2no, Masons 8 nos and mazdoors 15nos and the corresponding rates are Rs.450/-, Rs.400/- , Rs.350/- respectively. 6

14.a) Distinguish between the general specifications and detailed specifications. 6
b) What is supplementary estimate? 4

15.a) Explain the essentials of contract. 5
b) What are the advantages of item rate contract? 5

16.a) What is e-tendering? Explain its advantages. 5
b) What are PPP projects? Explain briefly. 5

17. An irrigation canal has the following details. Bed width = 6m, top width of left bank = 3.3m, top width of right bank 3.5m, side slopes in cutting 1 : 1 and side slopes of both banks 1.5:1. Height of banks from bed 2.55m, longitudinal slope of the bed 1 in 4000. There was no transverse slope of the bed and ground. Ground levels at 6 consecutive stations which are at 50m intervals are as follows. 10

Station	1	2	3	4	5	6
R.L. of ground, m	100	100.3	100.5	100.6	99.7	99.2

Bed level at station 1 is 98.5m. Compute the earthwork in cutting and filling.

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