

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B. Tech. Winter 2022- 23 Examination**

**Semester: 7**  
**Subject Code: 03104401**  
**Subject Name: Estimation, Costing and Valuation**

**Date: 13/10/2022**  
**Time: 10:30am to 1:00pm**  
**Total Marks: 60**

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**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

**Q.1 Objective Type Questions - ( Fill in the blanks, one word answer, MCQ) (All are compulsory) (15)**

(Each of one mark)

1. The volume of 1 bag of cement is  
(a) 0.35 m<sup>3</sup>            (b) 0.035 m<sup>3</sup>            (c) 0.0035 m<sup>3</sup>            (d) 3.5 m<sup>3</sup>
2. The actual size of standard bricks without mortar is  
(a) 19 x 9 x 9 mm    (b) 20 x 10 x 10 mm    (c) 19 x 9 x 9 cm        (d) 20 x 10 x 10 cm
3. The excavation exceeding 1.5 m in width and 10 sq.m in plan area with a depth not exceeding 30 cm, is termed as  
(a) Excavation        (b) Surface dressing        (c) Cutting                (d) Surface excavation
4. In preparing cement concrete by volume size of gauge box (farma) for measuring sand and aggregate is  
(a) 35 x 30 x 35 cm    (b) 33.3 x 30 x 35 cm    (c) 35 x 35 x 40 cm    (d) 33.3 x 33.3 x 33.3 cm
5. Pick up the item of work not included in the plinth area estimate  
(a) Wall thickness    (b) Room area                (c) Courtyard area        (d) W.C. area
6. Due to change in price level, a revised estimate is prepared if the sanctioned estimate exceeds\_\_ %.
7. The expected out turn of 2.5 cm cement concrete floor per mansion per day \_\_\_\_\_ .
8. Thickness of 25 gauge sheet is \_\_\_\_\_.
9. In detailed estimate the provision for contingencies is usually \_\_\_\_\_%
10. What is the density of aggregate?
11. For 12 mm thick cement plastering 1 : 6 on 100 sq.m new brick work, the quantity of cement required, is
12. Explain overhead charges with examples.
13. Enlist transporting equipments.
14. Write factors affecting rate analysis.
15. Enlist the points on detailed specification of a 1st class brickwork in C.M. 1:6.

**Q.2 Answer the following questions. (Attempt any three) (15)**

- A) What are the purpose of estimation and costing?
- B) Explain the given term in brief (i) Measurement book (ii) Bar bending schedule
- C) What are the role of billing engineer explain in brief.
- D) Define value, price, and cost.

**Q.3** A) Explain general specification for first class building in brief. (07)

B) Derive Rate analysis for 20 mm plaster of CM 1:4. (08)

**OR**

B) Write detailed specification for cement concrete in foundation. (08)

**Q.4** A) What are the advantages for having Bar bending schedule? (07)

**OR**

A) Enlist the types of bills explain any two in brief. (07)

B) Enlist the types of estimation and explain any two in brief. (08)