

**B.E. / B.Tech. Civil Engineering (Model Curriculum) Semester-VI**  
**PCC-CE603 / ESTIMATION1 - Estimation & Costing**

P. Pages : 2



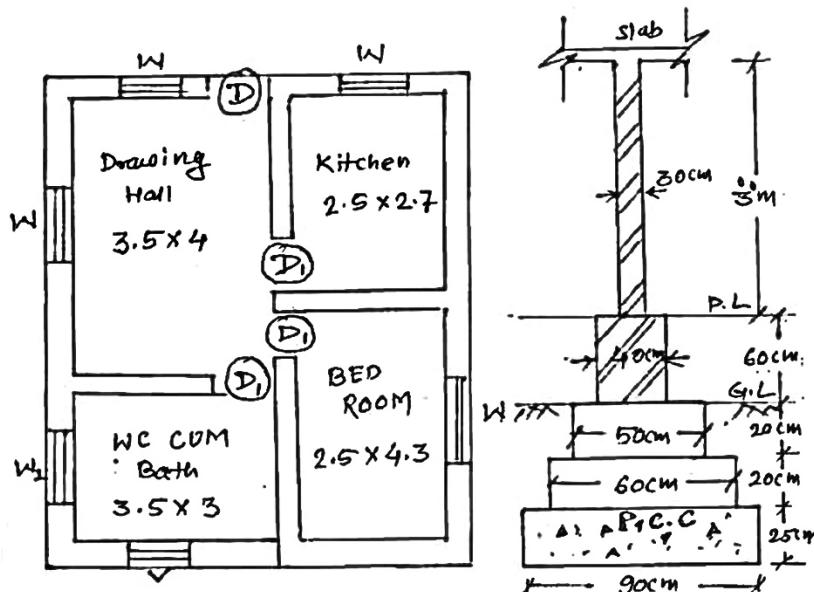
Time : Four Hours

GUG/S/25/13731

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.

1. Estimate the quantity for the following item of work for the given building plan & typical wall section. 16
- i) Earth work in excavation in foundation work.
  - ii) Brick Masonry in CM 1:5 in foundation & plinth
  - iii) Cement concrete 1:4:8 mix
  - iv) 12mm thick internal & External cement plaster in C. M. 1:4 for ceiling and wall.



Note :- All Dimension in Meter:

$$D = 1.2M \times 2.1M \quad W = 1.5M \times 1.5M$$

$$D1 = 0.9M \times 2.1M \quad W1 = 1.2M \times 1.5M \quad V = 0.9M \times 0.9M$$

2. a) State the different types of estimates explain in detail the various methods of preparing: 10
- i) Approximate estimate of building.
  - ii) Detailed estimate of building.
  - iii) Illustrate suitable examples.
- b) Explain the purposes of quality estimates. 6

**OR**

3. a) Enlist the types of contract & explain any two with its merits & demerits. 8
- b) Explain the terms "Administrative Approval" & "Technical Sanction". 8

4. a) Estimate the Quantity of earthwork of hilly road having formation width as 8m & side slope in banking is 2:1, side slope in cutting is 15:1 The RL of ground & formation RL are given as below: Use mean sectional area method. 10
- | Chainage | R. L of Ground (M) | Formation R.L. | Transverse Slope |
|----------|--------------------|----------------|------------------|
| 0        | 150.00             | 149.20         | 1 in 50          |
| 30       | 150.60             | 150.00         | 1 in 50          |
| 60       | 151.50             | 150.80         | 1 in 15          |
| 90       | 150.80             | 151.60         | 1 in 15          |
| 120      | 151.50             | 152.40         | 1 in 25          |
| 150      | 152.00             | 153.20         | 1 in 25          |
- b) State various forms used for detailed estimates. 6
- OR**
5. a) A RCC slab overall size 3.3m 6.8m 0.13m × × is provided with 16mmφ as main reinforcement bent up alternately and placed at 140 mm c/c. The alternate bar are bent up at 540mm from outer edge of slab distribution bars are of 6mmφ @ 180 mm c/c. Assuming cover as 20mm throughout calculate quantity of steel reinforcement in bar bending schedule Bearing over 30cm thick wall - 150mm. 8
- b) What is specification? Explain the various types of specification. 8
6. a) Analyzes the rates for following items **any two**. 10
- i) 12 mm thick internal cement plaster in C. M (1:4)
  - ii) P. C. C. (1 :4:8)
  - iii) IIInd class Brick masonry in C. M. 1 :6 with local bricks in super - structure.
- b) What do you understand by Task Work of Labor? Explain the factors affecting task work. 6
- OR**
7. a) Write a short notes on 6
- 1. Schedule of Rates.
  - 2. Market rates
- b) Distinguish between: i) Scrap value & salvage value ii) Book value & Market value. 6
- c) Write & explain the various forms of values. 4
8. a) Define valuation. Describe in brief various method of valuation 6
- b) A leasehold property is to produce a Net annual income of Rs. 12,000/- for the Next 30 years. The owner expects a return of 8% On his capital & also sets apart a sinking fund installment to accumulate 6% annually to replace the capital. Determine the capitalized value of property. 10
- OR**
9. Write short notes on following **any four**. 16
- i) Land Act Acquisition.
  - ii) Legal Aspects of various contract provisions.
  - iii) Arbitration general concept.
  - iv) Outgoing of a property.
  - v) M.A.S. Account.

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