

Roll No.....

**CE - 604**  
**B.E. VI Semester**  
Examination, December 2012  
**Quantity Surveying & Costing**

*Time : Three Hours*

**Maximum Marks : 100**

**Minimum Pass Marks :35**

*Note : 1. Total five questions are to be attempted. Any one question from each unit can be attempted.*

*2. Assume suitable missing/misprint data if required.*

**UNIT - I**

1. a) Define estimate? Explain different data required to make out on estimate. (8)
- b) Prepare a preliminary estimate of a four storeyed office building having a carpet area of 2000 sqm for obtaining the administrative approval of the government. Given the following data. It may be assumed that 30% of the built up area will be taken up by the corridors, Varandahs, lavatories staircase etc. and 10% of the built up area will be occupied by walls. (12)
  - i) Plinth area rate = Rs.950 per sqm
  - ii) Extra due to deep foundation at site = 1% of building cost
  - iii) Extra for special Architectural treatment = 0.5% of building cost.
  - iv) Extra for water supply & sanitary installations = 6% of building cost.

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- v) Extra for Electric installations = 12.5% of building cost.
- vi) Extra for other services = 5% of building cost.
- vii) Contingencies =  $2\frac{1}{2}\%$
- viii) Super vision charges = 8%

OR

- 2) a) Define estimate. What are the various types of estimate?  
What are the different uses of Approximate Estimate? (10)
- b) What are the general rules to be adopted for the measurements of various items of work. (10)

### UNIT - II

- 3) a) What are the purpose of rate analysis ? Why does the rate of an item changes with time in years. (10)
- b) Work out the rate analysis for plain cement concrete 1 : 2 : 4. (10)

OR

- 4) a) Write short notes on : (10)
  - i) Schedule of Rates
  - ii) Task of an artisan per day
- b) Work out the rate analysis for the first class brick work in superstructure in 1 : 6 cement mortar. (10)

### UNIT - III



- 5) The plan and sectional elevation of a building are given in (fig.1) Estimate the quantities of the following items of work in building.

- a) Earth work in excavation in foundation. (10)
- b) First class brick work in foundation and plinth. (10)

OR

- 6) Estimate the quantity of earth work for a portion of road for 400 m length from the following data : (20)

Formation width of the road is 10 meters. Side slopes are 2 : 1 in banking  $1\frac{1}{2}$  : 1 in cutting.

| Station | Distance<br>in meters | R.L. of<br>ground(m) | RL of<br>formation(m)  |
|---------|-----------------------|----------------------|--|
| 1       | 0                     | 51.0                 | 52.00  |
| 2       | 40                    | 50.90                |   |
| 3       | 80                    | 50.50                |  |
| 4       | 120                   | 50.80                |  |
| 5       | 160                   | 50.60                |  |
| 6       | 200                   | 50.70                | down ward<br>gradient of<br>1 in 200   |
| 7       | 240                   | 51.20                |  |
| 8       | 280                   | 51.40                |  |
| 9       | 320                   | 51.30                |  |
| 10      | 360                   | 51.00                |  |
| 11      | 400                   | 50.60                |  |

## UNIT - IV

- 7) a) Explain various factors which are important for cost controlling. (10)
- b) Define general or brief specification. Write general specification of a first class building. (10)

OR

- 8) a) What is over head costs? Enumerate various expenses to be included in this. (10)
- b) Give the percentage breakup of the cost of different main items of a residential buildings. (10)

### UNIT - V

- 9) a) What is Depreciation? Explain various methods of calculating depreciation in detail. (10)
- b) Explain the following : (10)
- i) Obsolescence
  - ii) Sinking fund
  - iii) Capitalized value
  - iv) Year's purchase

### OR

- 10) a) What are the various purposes of valuation? Explain in brief different methods of valuation. (10)
- b) A three storied building is standing on a plot of land measuring 800 sqm. The plinth area of each storey is 400 sqm. The building is of R.C.C. framed structure and the future life may be taken as 70 years. The building fetches a gross rent of Rs. 1500/- per month. Work out the capitalized value of the property on the basis of 6% net yield. For sinking fund 3% compound interest may be assumed. Cost of the land may be taken Rs. 40% per sqm. other data required may be assumed suitably. (10)

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