

Total number of printed pages-5

53 (CE 701) ESCS

2014

ESTIMATION AND COSTING

Paper : CE 701

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions.

1. Define the following terms : (**any ten**) 20
Contingencies, Work-charged Establishment, Building Cost index, Administrative approval, Prime cost, Technical sanction, Floor Area, Carpet area, Overhead cost, Scrape Value, Sinking Fund, Depreciation.

2. (a) Explain different types of estimates. 15

Contd.

(b) Analyse the rate of cement concrete of 1 : 2 : 4 proportions in 1 cum unit. Take 10 cum. 5

3. (a) What are the fundamental requirements to prepare an estimate ? What are the different precision used in measurement of different items of works as specified by IS 1200 ? 5

(b) What is schedule of bars ? Calculate the total additional length for 45° as well as 30° cranked or bent up bar. 5

(c) Prepare an approximate estimate of building project with total plinth area of all building is 800sqm and from following data : 10

(i) Plinth area rate ₹ 4500 per sqm.

(ii) Cost of water supply @ 7.5% of the cost of building.

(iii) Cost of Sanitary and Electrical installations each @ 7.5% of the cost of building.

(iv) Cost of Architectural feature @ 1% of building cost.

(v) Cost of roads and lawns @5% of building cost.

(vi) Cost of PS and contingencies @4% of building cost.

Determine the total cost of building project.

4. (a) Explain different items of works : 15

Masonry, Flooring and roofing, Plastering and pointing, Doors and Windows, Painting.

(b) What are the fundament purposes of valuation ? 5

5. Estimate the cost of a well foundation of a bridge. The well is to be circular of 5 meter internal diameter with 90cm thick wall in 1:6 cement and sand mortar. The well is to be founded on a strata 20 meter below bed of river which is dry during the hot weather. Bottom of the well is to be plugged with 1.50m thick cement concrete 1:3:6 and top is to be sealed with 1.00m thick cement concrete 1:3:6 and the central portion is to be sand filled. 20

6. (a) A coloniser intends to purchase a land of 100,000 *sqm* area located in the suburb of a big city to develop it into plots of 700 *sqm* each after providing necessary roads and parks and other amenities. The current sale price of small plots in the neighbourhood is Rs 30.00 per *sqm*. The coloniser wants a net profit of 20%. Work out the maximum price of the land at which the coloniser may purchase the land. 10

(b) Briefly explain different methods of Valuation. 10

7. (a) Write the detail specification of *any one* of the following :

Mosaic or terazzo floor, Galvanized corrugated iron (GCI) sheet. 5

- (b) Prepare a detailed estimate of a RCC Roof slab of 3 meters clear span and 6 meter long from the given drawing as figure 1. RCC work including centering and shuttering and steel reinforcement in detail shall be taken separately. 15

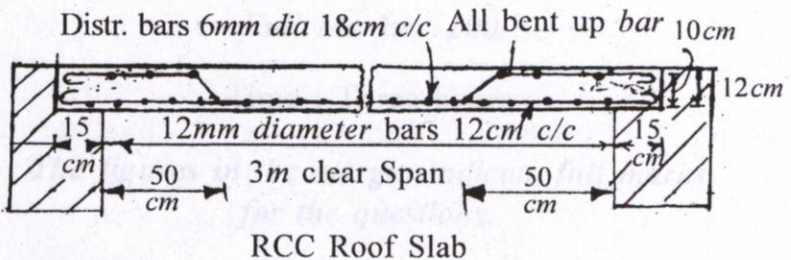


figure 1

8. Write short notes on : (any four) 20
- (a) Bill of quantities
 - (b) Measurement form
 - (c) Valuation
 - (d) Approximate Estimate
 - (e) Analysis of rates.