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320734(20)

B. E. (Seventh Semester) Examination, Nov.-Dec. 2021

(New Scheme)

(Civil Engg. Branch)

QUANTITY SURVEYING and COST EVALUATION

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *Attempt all questions. Part (a) from each question is compulsory. Attempt any* ***two*** *parts from part (b), (c) and (d) of each question.*

Unit-I

1. (a) Write the units of following : 2

   (i) Glazing,

   (ii) Supply of Bricks,

(iii) Stone masonrywork,

(iv) Brick work in foundation

(b) Explain following : 7

(i) Supplementry Estimate

(ii) Plinth Area method of building estimate

(iii) Muster Roll

(c) Prepare a preliminary estimate of a building project with a total plinth area of all buildings of 1500 sq.m Given that. 7

(i) Plinth area rate –₹ 950·00 per sq.m.

(ii) Extra for special architectural treatment–2% of the Building Cost.

(iii) Extra for water supply and sanitary installation–5% of Building Cost.

(iv) Extra for Internal Electrical Installation–12% of the Building Cost.

(v) Extra for Services– 6% of the Building Cost

(vi) Contingencies–3%

(vii) Supervision charges–7%

Or

Prepare a preliminary estimate of a double storeyed building having carpet area of 1,800 sq.m. It may be asssumed that 30% of the built up area will be taken by corridors, stairs, varandhas etc. and 10% of the built up area by walls.

Given plinth area rate is 15,000 Rs/m^2. Extra for water supply and sanitation is 5% of building cost, Extra due to deep foundation at site is 1% of building cost. Internal electrical installation is 12% of building cost and contingencies is 3%.

Unit-II

2. (a) Explain Lead and Lift. 2

(b) What type of data is required for Detailed Estimate? 7

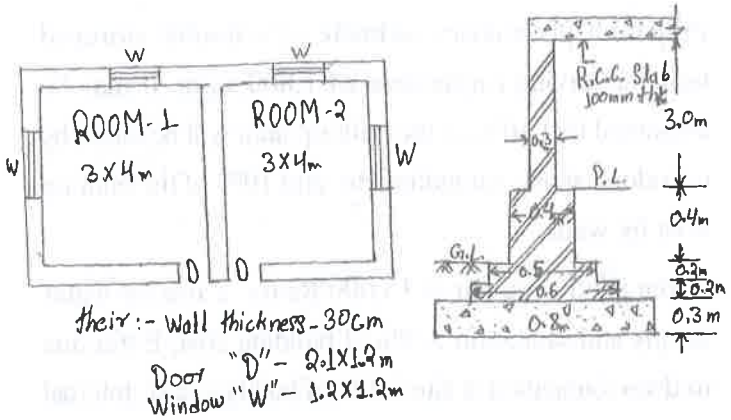
(c) Estimate the following item of works for given plan of Builing as per given cross-section of wall and foundation by long wall-short wall method. 7

(i) Earth work in excavation in foundation

(ii) Concrete in foundation

(iii) Brick work in plinth and foundation

(iv) Brick work in superstructure



Or

A road embankment is 20 m wide with side slope 2 : 1. The ground is level in transverse directinis to the centre line. Calculate volume contained in the length of 350 m. The central height at 5 m initervals being 2, 3·5, 3·0, 4·0, 3·0, 3·5 and 4·0 m respectively. 7

Unit-III

3. (a) Define Rate Analysis. 2

(b) Write detailed specification of R. C. C. Work. 7

Or

Write detailed specification of Ist class brick work in Super Structure. 7

(c) Work out the quantity of materials required for 100 sq. mtr. of 2 cm thick cement concrete 1 : 3 : 6. 7

Or

Analyze the rate of brick work for brick masonry in superstructure for 1 cubic meter by using Ist class brick and 1 : 3 cement Mortar.

Unit-IV

4. (a) Explain Lump sum contract. 2

(b) Write short notes on : (any **three**) 7

(i) Labour Contract

(ii) Negotiated tender

(iii) Earnest money

(iv) Global tender

(v) Liquidated Damages

(c) What do you understand by termination of contract? What are the criteria for termination of contract? 7

Or

Explain the essential requirement of valid contract.

Unit-V

5. (a) Define Book Value. 2

(b) Write short notes on : (any **three**) 7

(i) Salvage Value

(ii) Market value

(iii) Sinking Fund

(iv) Depreciation

(v) Free holds

Or

What are the objects of valuation of properties?

(c) A leasehold property is to produce a net annual income of ₹ 12,000 for the next 30 years. The owner expects a return of 8% on his capital and also sets apart a sinking fund installment to accumulate at 6% annually to replace the capital. Determine the value of the property. 7

Or

A new building having six equal flats is constructed at a cost ₹ 30,00,000/- on a plot of land costing ₹ 10,00,000/-. The owner expects 12% return on the construction cost and 8% return on cost of Land. Calculate the standard rent for each flat of the building. Considering the following data :

(i) Future life of the building be 70 years

(ii) Interest on sinking fund be 6%

(iii) Scrap value 10%

(iv) Other outgoing at 30% of net return from the building (sinking fund co-efficient for 70 yrs. @ 6% = 0·0010)

(v) Annaul repairs at 1% of the cost construction.