

## B.Tech. Degree VII Semester Examination November 2019

### CE 15-1704 QUANTITY SURVEYING AND VALUATION (2015 Scheme)

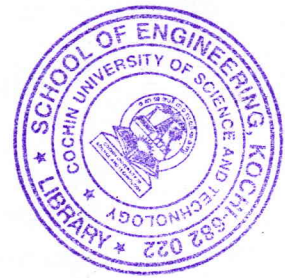
Time : 3 Hours

Maximum Marks : 60

#### PART A (Answer ALL questions)

(10 × 2 = 20)

- I. (a) What is approximate estimate? How is it classified?
- (b) Write short notes on centerline method.
- (c) Give the rate calculation for brickwork in CM 1:6 in super structure.
- (d) Write a short note on Bar bending Schedule.
- (e) What is the purpose of doing rate analysis?
- (f) What is sinking fund? How it can be determined?
- (g) Enlist different methods of Valuation for an open plot.
- (h) What is Sentimental Value? How is it caused?
- (i) Write the difference between annuity certain and annuity due.
- (j) Write short notes on Hypothetical Building Scheme.



#### PART B

(4 × 10 = 40)

- II. (a) Write short notes on:
  - (i) Cost Comparison Method (ii) Approximate quantities with bill method. (5)
  - (b) Write the detailed specifications of the following items. (5)
    - (i) Reinforced Brickwork (ii) Coursed Rubble Stone Masonry
- OR
- III. Estimate the quantities of the following items of the building shown in the figure. (10)
  - (i) Earthwork in excavation for foundation
  - (ii) Damp proof course
  - (iii) First class brick masonry in super structure.

Specifications

Foundation and plinth – Random rubble masonry in CM 1:8 over lime concrete

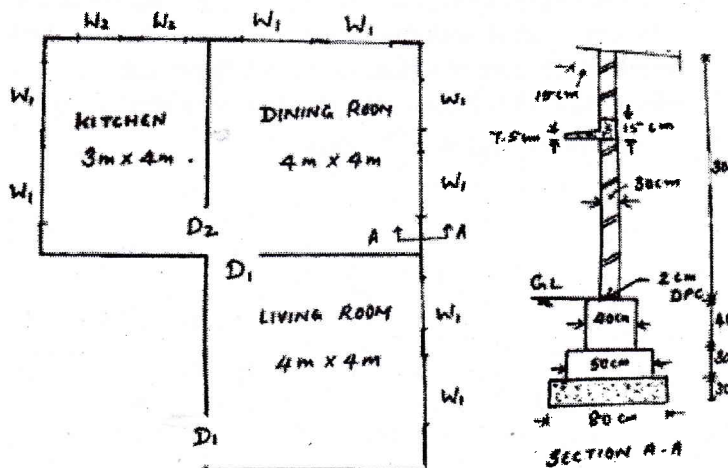
Wall – Brick work in CM 1:5

D1 – 100 × 210

D2 – 80 × 210

W1 – 150 × 150

W2 – 120 × 150



- IV. A RCC (prop 1:1:2) rectangular beam 20 cm wide  $\times$  30cm deep  $\times$  3m overall length is reinforced with Tor steel bars 3 nos. 16mm dia. two outer bars straight and L-hooked at ends and the inner bar bent up at  $45^\circ$  at appropriate places with L- hooked at ends. At top, two outer hanger bars are 10mm in dia. straight and L-hooked at ends. Stirrups are 6mm in dia. MS bar and spaced at 20 cm centers. All concrete cover = 2.5cm. (i) Draw a neat sketch showing the arrangements of reinforcements for the beam (ii) Work out the quantities of materials for RCC beam and prepare a schedule of bars. (10)

OR

- V. Prepare an estimate for the portion of a road from chainage 12 to 20 from the data given below. Draw also the longitudinal and typical cross-sections for cutting and banking. The rate of earthwork in cutting is ₹10.00 per cum and embankment is ₹8.50 per cum. The formation width of the proposed road is 10m. Side slopes  $1\frac{1}{2}:1$  in cutting and 2:1 in banking. (10)

Chainage (30m)	12	13	14	15	16	17	18	19	20
R,L of Ground	107.50	108.15	108.30	107.75	107.40	106.15	105.70	106.05	106.10

The road formation is proposed at uniform falling gradient 1:200 upto chainage 20. Length of one chain = 40m.

- VI. (a) Explain any five types of values. (5)  
 (b) What is depreciation? What are the various methods used to calculate depreciation? Explain. (5)

OR

- VII. A machine was purchased at ₹1,00,000/-. The salvage value of the machine after 6 years is ₹30,000/-. Calculate the depreciation and book value each year by adopting (10)  
 (a) Straight line method  
 (b) Constant percentage method  
 (c) Sinking fund method considering 5% interest.

- VIII. (a) What are the factors affecting value of agricultural land? Explain. (5)  
 (b) A residential building constructed on a plot measuring 525 sq.m. The construction cost of the building is ₹ 1,75,000. The land was purchased by the owner at ₹ 145 per sq.m. The total outgoings including sinking fund is ₹ 11,500. Work out the gross and net rent of the property, if the owner desires 6.5% return on the construction cost and 5% on the value of the land. (5)

OR

- IX. A property is proposed to be developed on a south facing plot of land on a 34m wide road having a frontage of 30m and a depth of 60m. The front belt may be taken up to 25m with the value fixed at ₹400 per sqm for the front belt land. An eight-storied building having an overall height of 30m above the ground is proposed to be constructed with 5m space on the east 1.3m on the west and 12m on the north. If the cost of construction is ₹70 per cubic m and rentable area is 60% of covered, find the average rent to be realized per sq m of rentable area, for investment to yield at  $8\frac{1}{4}\%$  gross. (10)

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