5E3155-R

B. Tech. (Sem. V) (Main / Back) Examination, December - 2011
Civil Engg.
5CE5 - Quantity Surveying & Valuation

Time : **3** Hours]   [Total Marks : **80**
[Min. Passing Marks : **24**

Instructions to Candidates :

*Attempt any **five** questions selecting **one** question from each unit. All questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

Use of following supporting material is permitted during examination. *(Mentioned in form No. 205)*

1. _____Nil_____   2. _____Nil_____

UNIT - I

1   (a)   Explain the general rules for measurement of works.   8

   (b)   Write down units of measurements for the following works :
   (i)   Dismantalling of electric wiring
   (ii)   Sawing of timber
   (iii) Damp-proof course
   (iv)   Kerb stone laying
   (v)   Roofing with GI sheets
   (vi)   Ornamental Pillar Caps
   (vii) Plastering on walls
   (viii) Lettering.

   8×1=8

OR

1   Write short notes on the following :
   (a)   Cube Rate Estimate
   (b)   Bill of quantities
   (c)   Circulation area
   (d)   Schedule of rates.

   4×4=16

UNIT - II

2 (a) Describe the purposes of 'Rate Analysis'. **4**

(b) Analyse the rate of following item of works (assume suitable data e.g. rates of material and labour etc) for "First Class brick work in 1:4 cement sand mortar". **12**

OR

2 (a) Discuss the various factors affecting the Rate Analysis. **6**

(b) Analyze the rate of 12 mm thick 1:6 cement and local sand mortar plaster on brick wall including material, labour T and P, watering etc. **10**

UNIT - III

3 Estimate the cost of earth work for a portion of 200 m length from the following data :

Chainage	R.L. of ground	R.L. of formation	Gradient
0	101.50		Rising gradient (1 in 40)
20 m	100.90		
40 m	101.50	102.75	
60 m	102.00		
80 m	102.85		
100 m	101.65		
120 m	101.95		Falling gradient (1 in 100)
140 m	100.70		
160 m	101.25		
180 m	99.90		
200 m	100.60		

The formation width of road is 12 m. Side slopes are 2:1 in banking, $1\frac{1}{2}:1$ in cutting.
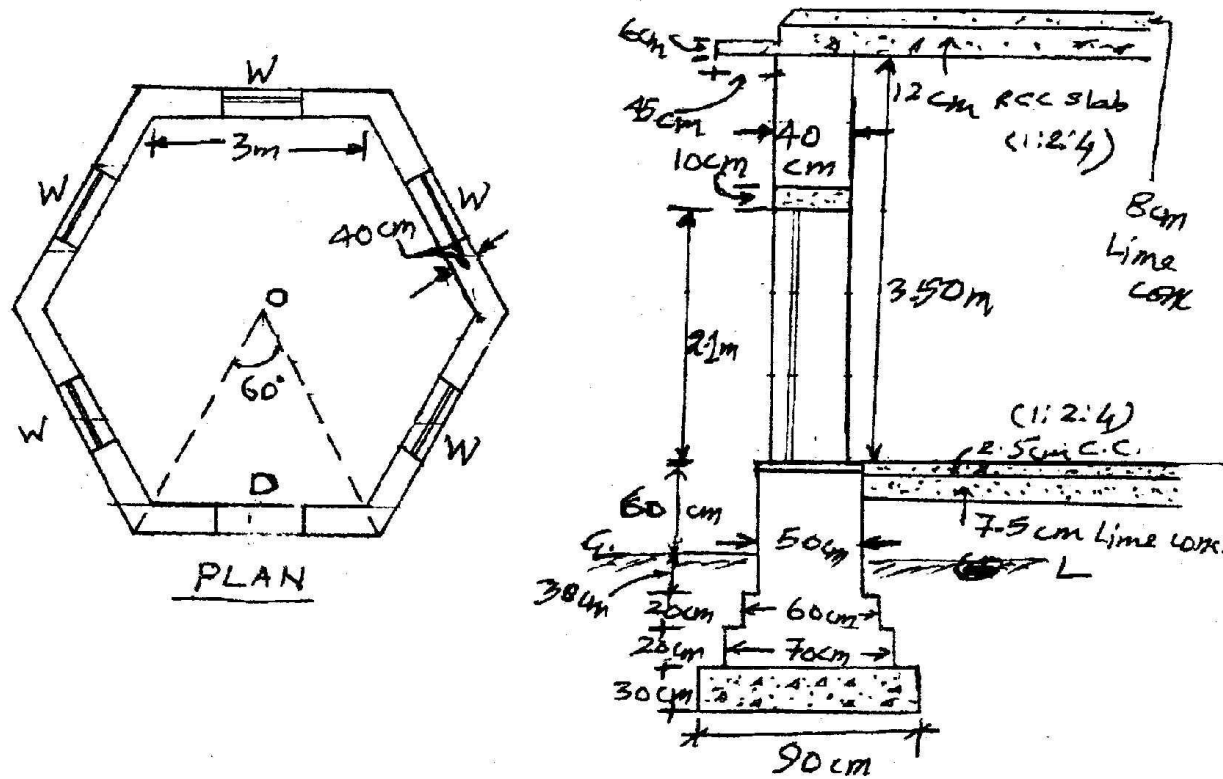
Draw Longitudinal section of the road and a typical cross-section at chainage 100 m, and prepare an estimate of the earthwork for the road at the rate of Rs. 235/- per cubic meter. **16**

OR

3   Figure-1 shows the plan and section of the wall at the door of a hexagonal room. Prepare the detailed estimate of following items :

(a)   Earth work in excavation of foundation

Door (D) : 1.2 m × 2.1 m
Window (W) : 1.1 m × 1.5 m

SECTION OF WALL AT THE DOOR

Fig. 1

(b)   Lime concrete in foundation.

(c)   First class brick work in foundation and plinth.

(d)   First class brick work in super structure.

(e)   2.5 cm thick cement concrete over 7.5 cm thick lime concrete.

(f)   12 mm thick 1:6 cement sand mortar plaster.

Also prepare abstract of cost adopting suitable rates.

16

UNIT - IV

4   (a)   Describe work charge establishment in detail.

6

(b)   How does a subsidiary cash book differ from an ordinary cash book ? What certificate is required to be given at the time of closing of a cash book ?

10

OR

4   Write short notes on the following :
    (a)   Measurement Book
    (b)   Travelling allowance
    (c)   Liquidated damages
    (d)   Imprest Account.

                                                        4×4=16

UNIT - V

5   (a)   A city corporation has to acquire an area of 3,50,000 sqm for
          the development of a new colony. After developing the area it
          is proposed to be sold at Rs. 3,000.00 per sqm. Workout the
          maximum compensation which can be given to the owners,
          whose land is to be acquired for the development of the colony
          assuming :
          (i)   The corporation establishment charges = 15% on sale price
          (ii)   40% area is to be provided for roads, parks and other pub-
                 lic amenities
          (iii) Colony improvement expenditure = Rs. 130 per sqm.
          (iv)   Engineer's and Architect's fee for surveying and planning
                 the colony = 4% on the sale of plots.

                                                                    10

    (b)   What is sinking fund and why it is provided ?

                                                                    6

                              OR

5   Write short notes on the following :
    (i)   Depreciation
    (ii)   Annuity
    (iii) Development method of valuation
    (iv)   Rent statement.

                                                        4×4=16