|BCE-034|

DIPLOMA IN CIVIL ENGINEERING (DCLE(G)) DCLEVI

Term-End Examination

June, 2013

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BCE-034 : ESTIMATING AND QUANTITY SURVEYING - I

Time : 2 hours   *Maximum Marks : 70*

Note : *Attempt five questions in all. Question number 1 is* **compulsory.** *Assume suitable datas, wherever required.*

1. Choose the correct answer from the given alternatives : 7x2=14

   (a) MB (Measurement book) is an important document, used for :

   (i) Site notes

   (ii) Test results

   (iii) Work done

   (iv) Attendance of labours.

   (b) In $1.0m^3$ of cement, number of cement bags is :

   (i) 33.33 Nos.   (ii) 30 Nos.

   (iii) 35.00 kg   (iv) 50 kg.

(c) Unit of measurement for chaukhat and shutter is :

   (i) Cub m and Sq m

   (ii) Cub m and Cub m

   (iii) Sq m and Cub m

   (iv) Sq m and Sq m

(d) According to BIS (Bureau of Indian Standards, size of modular brick is :

   (i) $25 \times 13 \times 7.5$ cm

   (ii) $20 \times 10 \times 10$ cm

   (iii) $9' \times 4\frac{1}{2}' \times 3'$

   (iv) $23 \times 11.50 \times 7.50$ cm

(e) Barbed Wire fencing is measured by :

   (i) kg or quintals

   (ii) Sq m

   (iii) Wire gauge

   (iv) Running meter

(f) For estimation of circular plan buildings, which method is useful ?

   (i) Long wall short wall method

   (ii) Circular wall method

   (iii) Centre line method

   (iv) Perimeter method

(g)   As per IS : 1200 part XIII Lath plastering is measured in :

   (i)   Cubic Meters

   (ii)   Square Meters

   (iii)   Area × thickness of Lath

   (iv)   Running meter.

2.   Calculate the quantity of earth work for 750 m length for a formation of road in cutting. The depth at two ends being 1.60 m and 1.40m. The formation width is 7.50m side slopes are 2 : 1 (Horz : Vert).   2x7=14

   Solve the question by **any two** methods as given below :

   (a)   Average cross sectional area method

   (b)   Prismoidal formula method

   (c)   Mean depth method.

3.   Prepare " Analysis of Rate" for *any two* items of works :   2x7=14

   (a)   Earth work in soil mixed with boulders.

   (b)   RCC 1 : 2 : 4 in beams & slabs

   (c)   Pointing 1 : 3 on walls.

   (d)   White wash one coat on walls.

4. Write down detailed specifications for *any two* items of work : 2x7=14

   (a) Distempering

   (b) First class Brick work 1 : 6 cm

   (c) Plastering 12 mm thick 1 : 4 cm

   (d) P. C. C. 1 : 4 : 8 in foundation beds.

5. The inside dimensions of a room are 5.70 × 3. 70 m . Height is 3. 20 m The plinth wall is 30 cm wide, which goes 20 cm below GL and 50 cm above GL Under this plinth there are two footings 40 cm wide and 60 cm wide, respectively, while their respective heights are 10 cm and 20 cm. All this brickwork has been erected on PCC 1 : 4 : 8 , 1.0 m wide and 30 cm thick. Walls in super structure are 20 cm thick.

   (a) Draw the cross section of wall and foundation. 4

   (b) Calculate the quantities of following items of works : 2½x4=10

       (i) Earth work in excavation

       (ii) PCC 1 : 4 : 8 in foundation

       (iii) Brickwork in footings

       (iv) Brickwork in plinth.

6. (a) What do you understand by "Contract system" ? Write the procedure involved from inviting of tender to allotment of contract. 2x7=14

(b)   Explain the various sanctions and approvals of work with respect to construction. Write in brief.

7.   Write short notes on *any four* of the following :

(a)   Work charged establishment $4 \times 3\frac{1}{2} = 14$

(b)   Special repair works

(c)   Common Irregularities in M.B.

(d)   Schedule of Rates

(e)   Overhead charges

(f)   Necessity of Estimates.

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