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BCE-034

Diploma in Civil Engineering
DCLEVI

01339

Term-End Examination

June, 2012

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 data wherever required. Use of calculator is **permitted.***

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

(a) One of the following methods is used for calculating earth work along a road alignment. Choose correct answer :

(i) Average cross - sectional area method.

(ii) Long wall and short wall method

(iii) Out to out and in to in method

(iv) Bucket filling method

(b) Unit of measurement for random rubble stone masonary is :

(i) per km (ii) per m^2

(iii) each stone (iv) per m^3

(c) Trussess are used for :

(i) Basement slabs

(ii) Intermediate slabs

(iii) Flat slabs

(iv) Sloped roofs

(d) Which of the following is part of 'Over head charges' in an estimate ?

(i) Cost of materials

(ii) Communication - postage, telephone etc.

(iii) Cost of steel

(iv) Cost of bricks

(e) In 'Lump - sum contract' the work is awarded to execute :

(i) On item wise rates

(ii) On percentage rates

(iii) For a piece of work complete in all respects

(iv) Randomly selected works

(f) Earnest money is deposited along with tenders :

(i) 1% to 2% of the estimated cost of work

(ii) 10% of amount of final bill

(iii) 15% of cost of tender form

(iv) Depends on completion time of work

(g) Which of the following is not the part of tender document ?

(i) Measurement Book

(ii) Set of specifications

(iii) Copy of tender notice

(iv) Set of conditions of contract

2. A stretch of road is 300 m long. For making the road, the earth work is to be done in cutting. The cross - sectional area of earth in cutting is 15 m^2 and 20 m^2 at both the ends respectively. It's cross - sectional area at mid point of road stretch is 18 m^2. Calculate the earth work in cutting for road using 'Prismoidal Formula Method'. **14**

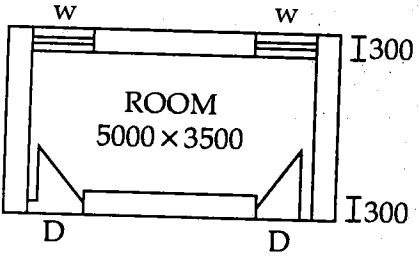
3. With the help of given plan of the room calculate the following items : **4x3½=14**

(a) Brick work in super - structure assuming wall height 3500 mm and neglecting lintels over doors and windows.

(b) RCC 1 : 2 : 4 for roof slab assuming flat roof and full bearing on walls. The thickness of slab is 120 mm.

(c) Quantity of flooring in room

(d) Wooden door frame taking cross - section of one piece of frame 125 × 75 mm.



Note : All dimensions are in mm

W = 1000 × 1200 mm

D = 1000 × 2100 mm

4. Prepare analysis of rates of ***any two*** of the following : **2x7=14**

(a) Lime concrete in roof terracing with 2.5 cm gauge brick ballast, white lime and surkhi in 100:18:36 proportion.

(b) Cement concrete in foundations and under floors with 4 cm gauge brick ballast, fine sand and cement in 10:5:1 proportion.

(c) Second class brick work in mud mortar in super - structure.

5. Differentiate between ***any four*** of the following :

(a) 'Administrative Approval' and 'Technical Sanction'. **4x3½=14**

(b) 'Mid - Sectional Area Method' and 'Prismoidal Formula Method'.

(c) 'Pre - Cast Concrete Work' and 'Cast - in - Situ Concrete Work'.

(d) 'Random Rubble Masonry' and 'Coursed Rubble masonry'.

(e) 'White Washing' and 'Colour Washing'.

(f) 'Ashlar Masonry' and 'Dry Rubble Masonry'.

6. Write the specifications for ***any two*** of the following : **2x7=14**

(a) Earth work in cutting

(b) First class brick work

(c) R.C.C work

(d) Cement plastering

7. Write short notes on ***any four*** of the following : **4x3½=14**

(a) Cast - in - situ concrete work

(b) Class - 'B' Buildings

(c) Ashlar Masonry

(d) Queen - post roof

(e) Proportioning and mixing of cement concrete

(f) Special Repairs