# Diploma in Civil Engineering

## Term-End Examination

## June, 2010

01315

## BCE-042 : ESTIMATING & QUANTITY SURVEYING-II

*Time : 2 hours*        *Maximum Marks : 70*

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

1. Select the correct answers from the given alternatives :      7x2=14

   (a) Estimation is important for :
   - (i) 'Cost planning' of a project
   - (ii) Preparation of detailed drawings
   - (iii) Selection for base year of rates
   - (iv) To get drawings corrected

   (b) In MES, SSR is compiled and published by :
   - (i) Garrison Engineer
   - (ii) DCWE (Contract)
   - (iii) Engineer-in-chief's Branch, New Delhi
   - (iv) Engineer-in-charge

   (c) Indian type WC with low level flushing cistern is measured as :
   - (i) Running metre    (ii) Numbers
   - (iii) Sq.m            (iv) Cubic metre

(d) Pressed steel frames (hollow) for doors are measured in :

(i) Running metre    (ii) Sq.m

(iii) Cu.m            (iv) kg

(e) In a project 'cost due to magnitude of work' is :

(i) A major factor

(ii) Sometime major and sometime a minor factor

(iii) Depends on judgement of the estimator

(iv) A minor factor

(f) The work which an average labour can do in one working day of eight hours is called :

(i) Unit work

(ii) Description work

(iii) Materials constant

(iv) Labour constant

(g) Any single work, job or service ordered on a Term Contract (TC) shall not exceed the amount of :

(i) Rs. 3,000       (ii) Rs. 60,000

(iii) Rs. 12,000     (iv) Rs. 30,000

2. (a) Prepare an analysis of rates for :      2x7=14
Brick work in well burnt old size bricks in super-structure, straight or curved on plan exceeding 6 metres radius built in cement mortar 1 : 6 (1 cement : 6 sand).

(b) Prepare star rate for supply and fixing of galvanised two strand steel barbed wire 2.24 mm dia barbed with 2 mm dia barbs at 75 mm spacing and straightening and fixing to any type of standard rails, including securing or tying at crossings with and provision of galvanised M. S. staples as directed (Each line of wire to be measured).

3. Calculate the painting area for the following types of doors, windows and ventilators : **1x14=14**
   - Panelled doors    $1000 \times 2100$ mm — 6Nos.
   - Flush doors        $900 \times 2100$ mm — 15Nos.
   - Wooden glazed windows    $1050 \times 1200$ mm — 10Nos.
   - Collapsible doors    $2100 \times 2500$ mm — 2Nos.
   - Steel glazed windows    $1500 \times 1800$ mm — 8Nos.

4. (a) A stadium building is proposed to be constructed for a seating capacity of 40, 000 people. The service unit for stadium is 'per seat'. The estimated cost per seat works out to Rs. 10,000 plus a Building cost Index 20%. Calculate the estimated cost of the stadium building. **2x7=14**

   (b) A residential complex has 10 numbers of type VI staff quarters, having plinth area of 280 sqm for each quarter. The plinth area cost per sqm is Rs. 8000. Calculate the estimated cost of the complex buildings taking cost Index 15% above the plinth area rates.
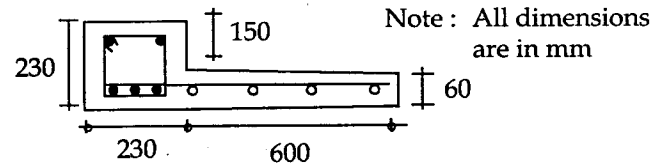
**5.**



$4 \times 3\frac{1}{2} = 14$

PLAN

W = 1000 × 1200 mm
D = 1000 × 2100 mm
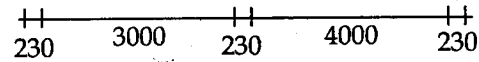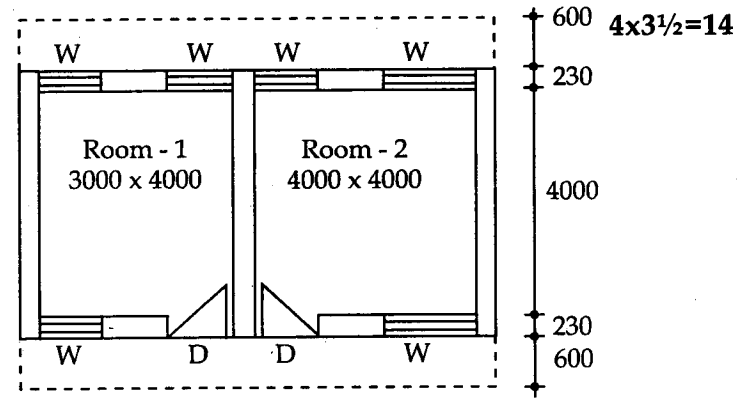
Note : All dimensions are in mm

With the help of the given sketch calculate the following items :

(a) RCC 1 : 2 : 4 in Chhajja

(b) Form work for RCC Chhajja

(c) Painting on doors and windows taking steel glazed windows and panelled doors.

(d) Kota stone flooring in rooms

6. A room has internal dimensions 5000 × 4000 mm. With the help of given foundation section calculate the following items : **4x3½=14**

   (a) RR Masonry upto ground level in cm 1 : 6

   (b) Plinth beam in a mix 1 : 2 : 4 of sec. 380 × 250 mm

   (c) Earth work in excavation in foundation trenches in hard soil.

   (d) Plinth protection assuming width 700 mm all around the building.



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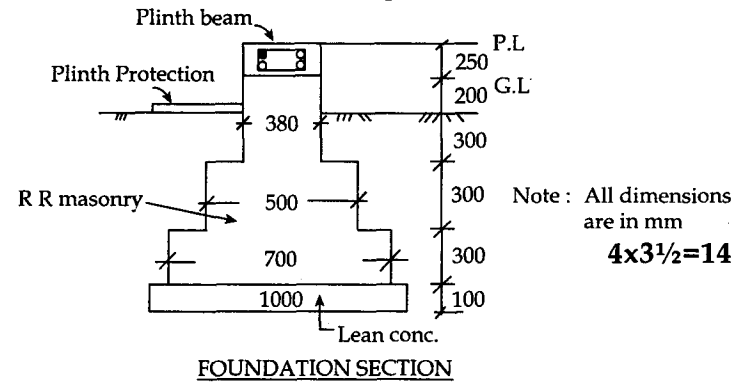
7. Write short notes on *any four* of the following :

   (a) Proportional Rate Concept          **4x3½=14**

   (b) Ordinary Requisition

   (c) Standard schedule of Rate Part-I

   (d) Estimate on service Unit Basis

   (e) Material Constants

   (f) Importance of Estimation