Diploma in Civil Engineering / Diploma In Electrical & Mechanical Engineering

Term-End Examination

June, 2006

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 answer from the given alternatives.

$7 \times 2 = 14$

(a)   As per MES practice, take-off sheet column 'No-3' is used for

(i)   Timsing

(ii)   Recording dimensions

(iii)   Writing description of items

(iv)   Recording the squaring results of the dimensions entered

(b) If dimensions entered in a take-off sheet are found incorrect, for cancelling dimensions a word in squaring column is written

    (i)   Cancelled

    (ii) Nil

    (iii) Erase

    (iv) Cross

(c) Mason is a labour of category

    (i)   Unskilled

    (ii) Skilled

    (iii) Semi-skilled

    (iv) None of the above

(d) Surface excavation for soil is an excavation for the depth

    (i)   upto 30 cm

    (ii) upto 1·50 metres

    (iii) from 1·50 to 3·00 metres

    (iv) Any depth

(e) For panelled wooden door shutter, the painting factor for each face of shutter is taken as

    (i)   0·50

    (ii) 1·10

    (iii) 1·30

    (iv) 0·80

(f) Abstracting of item of works is done

    (i) Quantity wise

    (ii) Trade wise

    (iii) Cost wise

    (iv) Sheet wise

(g) Standard unit of measurement for supply and fixing steel window is

    (i) kg

    (ii) sq m

    (iii) Metre

    (iv) cu m

2. Calculate the painting area for the following doors/windows :

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

    (i) Panelled wooden door shutter of size 900 × 2100 mm — 10 Nos.

    (ii) Wooden fully glazed windows of size 1200 × 1500 mm — 6 Nos.

    (iii) M.S. Rolling shutter of size 3000 × 1750 mm — 1 No.

    (iv) Collapsible shutter of size 2000 × 2100 mm — 2 Nos.

3. A room with R.C.C. flat roof has internal dimensions 3500 × 4500 mm. It has two windows of size 600 × 1200 mm and one door of size 900 × 2100 mm. Calculate the following quantities : 2×7=14

(i) 6 mm cement plaster on R.C.C. ceiling with 1 : 3 cement sand mortar

(ii) R.C.C. 1 : 2 : 4 in window sills assuming cross-section of sill 230 × 100 mm

4. Calculate the following items from the given Figure 1 for a rectangular column : $4 \times 3\frac{1}{2} = 14$

(i) Earthwork in excavation

(ii) Cement concrete 1 : 4 : 8 in foundation

(iii) R.C.C. 1 : 2 : 4 in column foundation

(iv) R.C.C. 1 : 2 : 4 in column upto plinth level

Column
200 × 400
R.C.C. 1 : 2 : 4

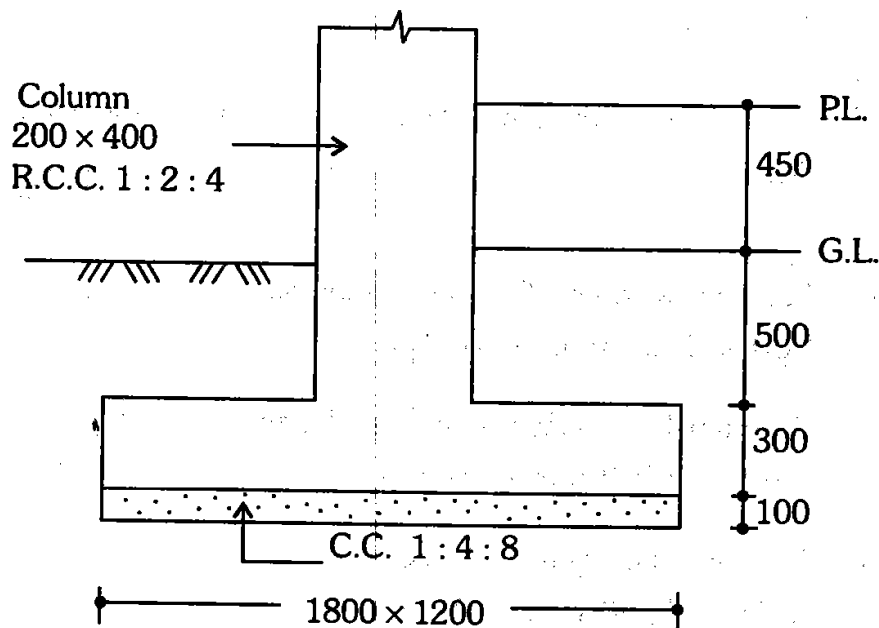P.L.
450
G.L.
500
300
100

C.C. 1 : 4 : 8

1800 × 1200

Figure 1

Note : All dimensions are in mm

5. Roof terrace of a building with R.C.C. flat slab has a 600 mm high parapet wall. The internal size of the terrace is 6000 × 8000 mm. Calculate the quantities of the following items : 2×7=14

   (i) 75 mm × 75 mm size C.C. gola with 1 : 2 : 4 mix along parapet wall on roof terrace.

   (ii) Waterproofing treatment on roof surface.

6. Prepare the analysis of rate for the following items (Assume suitable rates for labour and materials) : 2×7=14

   (i) Brickwork with well burnt traditional bricks in half brick thick walls built in cement mortar 1 : 4 (1 cement : 4 coarse sand)

   (ii) Cement concrete in foundation with mix 1 : 4 : 8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).

7. A R.C.C beam has a cross section 250 × 450 mm and length 5000 mm. In its shear reinforcement 8 mm dia tor bar stirrups are provided @ 200 mm centre to centre spacing. Calculate the quantities of the following items : 2×7=14

   (i) R.C.C. 1 : 2 : 4 in beam

   (ii) M.S. reinforcement for stirrups in the beam (assume 25 mm clear cover from all faces)

8. Write short notes on any **four** of the following : $4 \times 3\frac{1}{2} = 14$

(i) Essentials of Analysis of Rates

(ii) Abstracting

(iii) Method of preparation of star rates

(iv) Importance of Estimation

(v) Plastering and Painting