Diploma in Civil Engineering

Term-End Examination

June, 2007

BCE-034 : ESTIMATING & QUANTITY SURVEYING-I

Time : 2 hours *Maximum Marks : 70*

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

1. Choose the correct answer from the given alternatives. *7×2=14*

(a) For calculating earthwork in road embankment, 'Prismoidal Formula' is

(i) $V = \frac{l}{16}(A_1 + 4\,A_m + A_2)$

(ii) $V = \frac{l^2}{8}(A_1 + 4\,A_m + A_2)$

(iii) $V = \frac{l}{6}(A_1 + 4\,A_m + A_2)$

(iv) $V = \frac{l}{6}(A_1 + A_2)$

(b) For laying 25 mm thick cement concrete 1 : 2 : 4 mixed with water-proofing compound as D.P.C., the unit of measurement is

(i) sq. m

(ii) cu. m

(iii) running metre

(iv) each

(c) In half brick masonry wall, the type of bond/layer used is

(i) Flemish

(ii) Stretcher

(iii) Header

(iv) Harrying

(d) For excavation of 1·5 m deep foundation trench of a building, 1·5 m refers to

(i) Lead

(ii) Lead and lift

(iii) Lift

(iv) None of the above

(e) Extra length for each hook in reinforcement is taken as

(i) 9 d

(ii) 18 d

(iii) 16 d

(iv) 24 d

(f) For deposit works, the funds are made available by

(i) construction agency

(ii) tenant

(iii) executing agency

(iv) client agency

(g) 'Measurement Book' is used for

(i) recording measurements of the executed work for making payment to contractor

(ii) recording site instructions

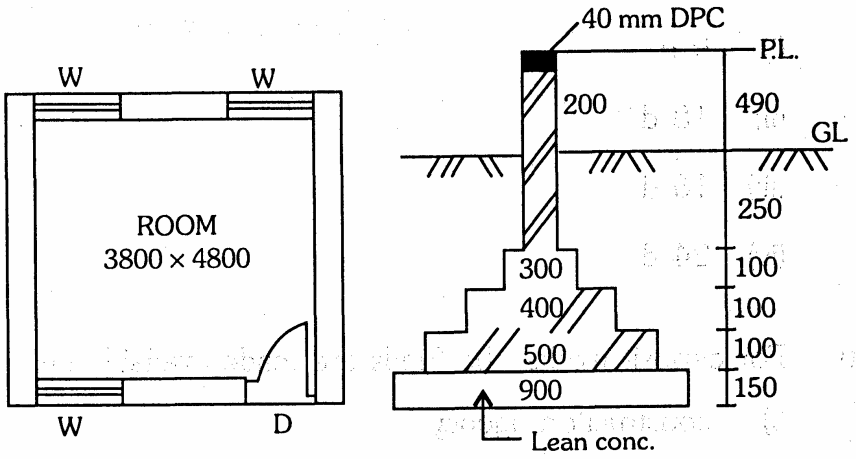
(iii) recording rough work

(iv) recording dimensions for estimation

2. Calculate the following quantities from the given sketch : *2×7=14*

(i) Earth work in excavation for foundation trench

(ii) Brick work in foundation and plinth

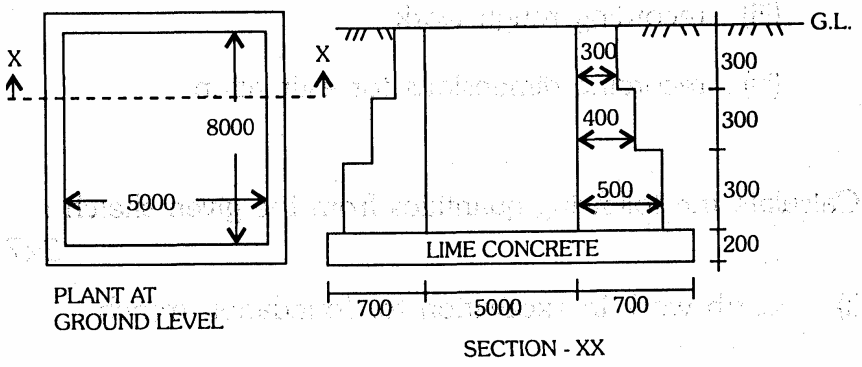


Note : *All dimensions are in mm.*

3. Compute the quantity of the following items with the help of sketch of an underground tank given below : *2×7=14*

(i) Lime concrete in foundation bed

(ii) Earth work in excavation



4. Prepare analysis of rates for any ***two*** of the following items, assuming your own rates : $2\times7=14$

(i) Lime concrete for foundation and under floors with 4 cm gauge brick ballast, white lime and surkhi in 100 : 16 : 32 proportion.

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

(iii) First class brick work in 1 : 6 cement sand mortar in foundation and plinth.

5. Differentiate between any ***four*** of the following : $4\times3\frac{1}{2}=14$

(i) Random rubble and Ashlar masonry of stone work

(ii) White washing and Colour washing

(iii) Glazed doors and Wire gauzed doors

(iv) Special repairs and Maintenance and repair works

(v) Item rate contract and Percentage rate contract

(vi) Muster Roll and Measurement Book

6. Write specifications for any ***two*** of the following : $2\times7=14$

(i) Dry Rubble Masonry

(ii) Half brick masonry with first class bricks

(iii) Earth work in filling for road work

(iv) Cement plastering on brick walls

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

(i) Coursed Rubble Masonry in stone work

(ii) Damp-Proof Course (DPC)

(iii) Collapsible Gates and Shutters

(iv) Distempering

(v) Factors affecting cost of work

(vi) Administrative Approval (or sanction) of proposal