| BCE-045 |

DIPLOMA IN CIVIL ENGINEERING
DCLE(G) / DCLEVI
Term-End Examination

⬜⬜⬜15   **December, 2017**

BCE-045 : CONSTRUCTION DRAWING

Time : 2 hours   *Maximum Marks : 70*

Note : *Part A is to be attempted on answer script and Part B on a drawing sheet. Use of calculator is allowed.*

PART A

Attempt any five questions.

1. Which types of drawings are required for construction of any structure ? Explain.   7

2. Show any seven symbols of electric and sanitary installation in a tabular form.   7

3. What are the various types of wooden joints ? Explain any one with the help of neat sketches.   7

4. What are the main considerations for fixing dimensions of a footing ? Explain.   7

5. Define (a) Voussoir, (b) Extrados, (c) Pier, and (d) Haunch.   7

6. Show by means of line diagrams the various types of steel roof trusses.   7

7. Show by means of a neat sketch the reinforcement details of a simple two-way slab.   7

PART B

Attempt question no. **8** *which is* **compulsory** *and any* **one** *question from the remaining. Assume suitable scale and mention it.*

8. Draw the cross-section and longitudinal section of an R.C.C. beam from the following data : **15**

   (i) Size of the beam = 300 × 600 mm

   (ii) Clear span = 3·0 metre

   (iii) Wall thickness = 300 mm

   (iv) Bearing on wall = 300 mm (each side)

   (v) **Main reinforcement = 3 Nos 20 mm ϕ bars**

   (vi) **Stirrups = 8 mm ϕ @ 200 c/c**

   (vii) Anchor bar = 2 Nos, 12 mm ϕ

   Assume and mention missing data, if any.

9. A single leaf, fully glazed wooden door of size 1·20 m × 2·10 m with two glass panels inserted is provided in a living room.

   (i) Draw the elevation of the door. **12**

   (ii) Draw the sectional plan of the door. **8**

10. Draw the sectional plan and sectional elevation of one-way R.C.C. slab with the following data : *20*

Size of room = $3{\cdot}0$ m $\times$ $7{\cdot}0$ m

Bearing on wall = 300 mm

Slab thickness (t) = 150 mm

Main reinforcement = 10 mm ϕ @ 150 c/c

Distribution bars = 8 mm ϕ @ 200 c/c

Assume and mention missing data, if any.

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