Reg. No. ....

Signature ....

FOURTH SEMESTER DIPLOMA EXAMINATION IN ARCHITECTURE — OCTOBER, 2013

WORKING DRAWING—I

[*Time* : 3 hours

(Maximum marks : 100)

[*Note* :— 1. Drawings shall be neat and fully dimensioned.
2. Missing data may be suitably assumed.
3. A2 size drawing sheets to be supplied.]

Marks

PART—A

(Maximum marks : 10)

I Answer all questions in one or two sentences. Each question carries 2 marks.

1. Define T–Junction.

2. What is a raft foundation ?

3. Write the function of windows.

4. What is a 'head room' ?

5. What is a 'truss'? (5×2=10)

PART—B

(Maximum marks : 30)

II Answer *any three* questions. Each question carries 10 marks.

(a) Draw a detailed sketch of a raft foundation. Show clearly the walls, flooring in between the walls and reinforcement of the raft. Assume suitable sizes.

(b) Draw plan of two consecutive courses for corner joints of one brick flemish bond and its elevation for a height of 50cm.

(c) Draw the front elevation of fully glazed window of size 100 × 120cm.

(d) Draw line diagram of plan and elevation of a circular stair.

(e) Draw line diagram of a steel roof truss for a span of 7.5m and mark the important components. (3×10=30)

Marks

PART—C
(Maximum marks : 60)

(Answer one full question from each unit. Each question carries 15 marks)

UNIT—I

III Draw the plan of a square footing for an RCC column showing the reinforcements in the footing and in the column.

Footing :   1.5m × 1.5m size, depth 200mm.
               Reinforcement 8 nos 12mm φ bars in each direction.
Column :   200mm × 200mm size.
               Main bars 4 nos 16mm φ Lateral ties 6mm φ at 180mm c/c.   15

OR

IV Draw the cross section of the foundation details of a wall and steps. Thickness of wall 30cm. (Brick in cm 1:4) Basement 40cm wide and 60cm height (Brick in cm 1:5) Foundation 50cm wide and 60cm deep (Brick in cm 1:5) Base layer of foundation (PCC 1:4:8) 20cm, Rise and tread of steps 15cm and 30cm. respectively(Brick in cm 1:5) Foundation of step 10cm thickness (PCC 1:4:8).   15

UNIT—II

V Draw the sectional plan, elevation and cross sectional elevation of a panelled and glazed door of size 100 × 200cm.   15

OR

VI Draw the sectional plan and elevation of a double leafed panelled door of size 100cm × 200cm.   15

UNIT—III

VII Draw the plan and sectional elevation of a dog-legged stair with the following data : Tread 25cm, Rise 20cm, Width of stair 120cm, Floor to floor height 300cm.   15

OR

VIII A lift with a capacity of 10 passengers is to be provided to serve an office building having five storeys. Height of floors is 330cm. Assuming suitable dimensions, draw the plan of the lift well showing the car, the cross section showing the lift well and machine room.   15

UNIT—IV

IX Draw the details of the following steel truss joints :

(a) Detail of ridge joint.

(b) Detail of Heel joint.

(c) Plan of Heel joint.   15

OR

X Draw the elevation of a tubular roof truss of span 10m.   15