



c09-c-307

3223

BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2013

DCE—THIRD SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING—I

Time : 3 hours]

[Total Marks : 60

PART—A

4×5=20

Instructions : (1) Answer **all** questions.

(2) Each question carries **four** marks.

(3) Any missing data may be assumed suitably.

1. Draw the conventional signs for the following as represented in a sectional elevation :

(a) Sand

(b) Ceramic tiles

(c) Plywood

(d) Plastering

2. Draw the conventional signs for the following electrical fittings :

(a) Two-way switch

(b) One-way switch

(c) Exhaust fan

(d) 15-amp 3-pin socket outlet

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C09-C-307

3. Draw the line diagram of a king-post truss and label the parts.
4. Draw the electrical wiring layout of single-bedroom house.
5. Draw the marking plan of a single-room building of size 4.2 m×3.6 m having wall thickness 300 mm and width of foundation 1000 mm.

PART—B

20×2=40

Instructions : (1) Answer **all** questions.

(2) Each question carries **twenty** marks.

(3) The drawing must be to the scale.

(4) Any missing data may be assumed suitably.

6. The line diagram of a residential building is shown in the figure (Page-4). From the given specifications draw the following views to a scale of 1 : 50 :

(a) Fully dimensional detailed plan

(b) Section along A-A

Specifications :

- (i) Foundation : All the main walls are taken to a depth of 1000 mm below ground level and rest on CC (1 : 4 : 8) bed, 800 mm wide and 300 mm deep. The remaining portion consists of two footings 500 mm and 400 mm wide and are 300 mm deep. The footings are of brick masonry in CM (1 : 4).
- (ii) Basement : All the walls are 300 mm wide and the height of basement is 600 mm above general GL.
- (iii) Steps : Steps of 1200 mm wide are provided with brick masonry in CM (1 : 6) on both front and rear sides and rest on CC bed (1 : 4 : 8) 150 mm thick and having offset on the three sides equal to 100 mm. Tread of each step = 300 mm and rise = 150 mm.

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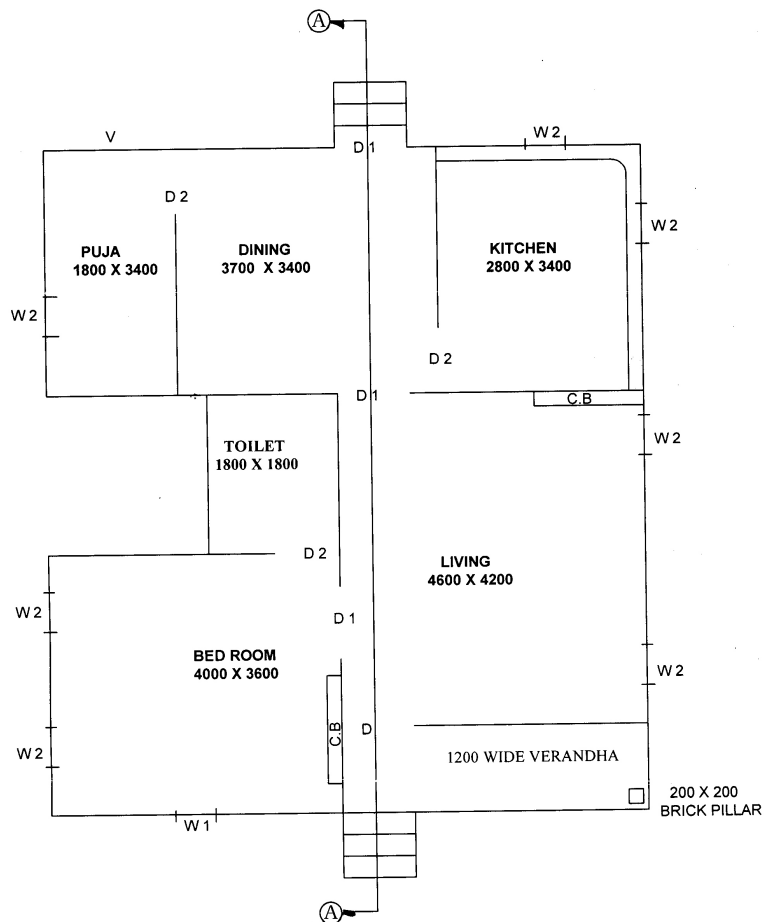
C09-C-307

- (iv) Superstructure : All the walls are 200 mm thick except two partition walls between bed and toilet and dining and toilet which are constructed on the floor with a thickness of 100 mm. The height of walls is 3300 mm to the bottom of RCC roof slab.
- (v) Lintels and sunshades : RCC (1:2:4) lintels are provided on all openings with 150 mm thickness and same 150 mm bearing on either side of opening. RCC sunshades are provided on all exterior doors, windows and ventilators with 90 mm thickness at wall face and 75 mm thickness at free end. The projection of sunshades beyond the wall surface is 700 mm.
- (vi) Front verandah : Front verandah is 1200 mm wide and a square brick pillar 200 mm×200 mm is provided on right side corner. An RCC beam 200 mm×250 mm is provided on the both sides of verandah resting on brick pillar, the height being 2100 mm from floor level to the bottom of RCC beam. The remaining portion between top of beam and bottom of RCC slab is of brick masonry in CM (1 : 6). A continuous sunshade as given in item no. (v) is provided in front side of building and on right side of the verandah extending from bottom of the RCC beam.
- (vii) Roofing : Roofing 120 m thick RCC (1:2:4) side is provided over the entire building.
- (viii) Parapet wall : Brick masonry parapet wall in CM (1 : 6) is of 100 mm thick and 700 mm height. A coping with 50 mm projections is provided at the top of the parapet wall.
- (ix) Flooring : Flooring consists of mosaic tiled flooring over 100 mm thick CC bed (1 : 4 : 8). The remaining depth of basement is filled with sand and gravel and thoroughly compacted.

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(x) Doors and windows : Doors, windows, ventilators and cupboards shall be provided as per the schedule given below :

Designation	Numbers	Modular size (in mm)	Specification
10 DS 21	D 2	1000×2100	Fully panelled
10 DS 21	D ₁ 2	1000×2100	Flushed door
9 DS 18	D ₂ 3	900×1800	Flushed door
15 WQ 12	W ₁ 1	1500×1200	Glazed window
10 WT 12	W ₂ 7	1000×1200	Glazed window
15 CBT 18	CB 2	1500×1800	Flushed shutters
10 V 6	V ₁ 2	1000×600	Glazed ventilator



7. Draw the line diagram showing the functional requirement of a primary school building.
