



c09-c-307

3223

BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2017

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 :

4

(a) Ashlar

(b) Concrete existing

(c) Stone

(d) Revolving door

2. Draw the plan of a brick wall in English bond for a corner wall.

4

3. Draw the elevation of fully panelled window (not to scale) and label the parts.

4

- * 4. Draw the sectional elevation of a lift shaft for a multi storeyed building. 4
5. Draw the site plan for a plot size of 18 m × 12 m with setbacks of 2 m on all sides with approach road on north side. 4

PART—B

20×2=40

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

(2) Any missing data may be assumed suitably.

6. Draw the plan and section for given line sketch shown below and following specification of a building, draw to a scale of 1 : 50 : 20

Specifications :

(i) Foundation : The depth of foundation shall be 1000 mm below ground level. The plain cement concrete (1 : 4 : 8) bed in the foundation will be 800 mm wide and 200 mm deep. The footing shall be of brick masonry in CM (1 : 4) width of first and second footing will be 500 mm and 400 mm respectively, whereas the dept of both the footing will be 400 mm.

(ii) Plinth or Basement : The height of basement is 600 mm. Damp proof course of 50 mm thick shall be provided under the superstructure walls. Thickness of walls in basement is 300 mm.

* (iii) Superstructure : The walls in the superstructure will be of brick masonry in CM (1 : 6) and all the walls except the partition between toilets are 200 mm thick. The partition walls are 100 mm thick from floor.

A square brick pillar 200 mm × 200 mm is provided at the corner in front verandah.

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- (iv) Lintels and sun-shades : Lintels with RCC (1 : 2 : 4) are provided on all openings and depth is 150 mm with a bearing of 150 mm on either side.

Sun-shades 100 mm thick at the wall face and 75 mm thick at free end are provided projecting from lintels over all exterior openings. A continuous sun-shade is provided both sides of front verandah. All the sun-shades shall project 600 mm from the face of the wall.

- (v) Verandah : In front verandah R.C.C. bressummer beam 200 mm × 250 mm is laid over the brick pillar, the bottom of the beam being at 2100 mm from floor level. From the bottom of the beam, the sun-shade projects on both sides to a length of 600 mm. The remaining height above the beam and roof consists brick masonry wall (entablature wall) in CM (1 : 6).

- (vi) Height of Superstructure : The walls in the superstructure are taken to a height of 3300 mm i.e., upto the bottom of roofing slab.

- (vii) Roofing : Roofing consists of RCC (1 : 2 : 4) slab 110 mm thick and weather proof course with two courses of flat tiles in CM (1 : 4) 50 mm thick is laid over RCC slab.

- (viii) Flooring : Flooring shall be of polished Shahabad stone slab 25 mm thick over 80 mm thick cement concrete (1 : 3 : 6) over sand filling in the basement.

- (ix) Parapet wall : Parapet 100 mm thick and 700 mm height with brick masonry in CM (1 : 4) shall be constructed all round the building. A coping of 150 mm × 150 mm thick shall be provided over the parapet.

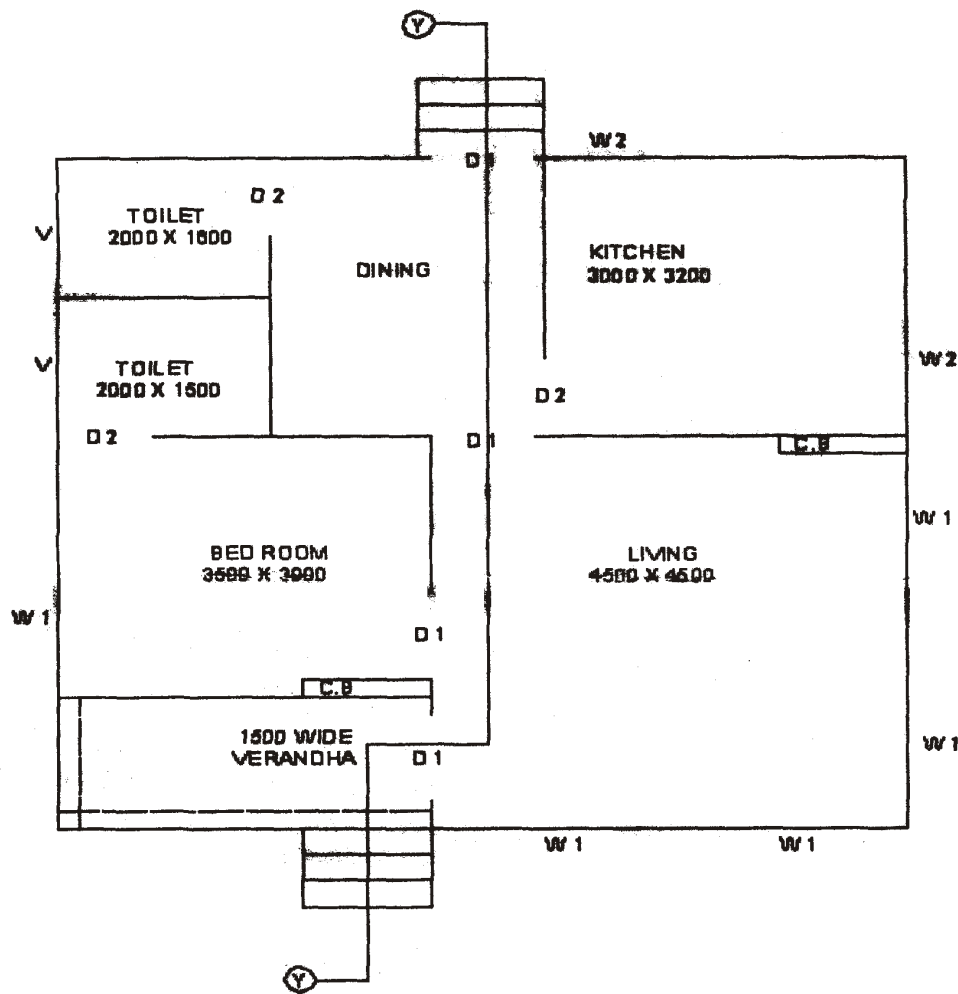
The dimensions given in line diagram are internal dimensions and width of verandah is up to end of verandah retaining wall.

- (x) Steps : Steps are provided in front side and rear side of length 1200 mm, the width of tread = 300 mm and rise of step = 150 mm. These are founded over 150 mm CC bed with 100 mm offset on all sides.

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Schedule of doors and windows :

Designation	Numbers	Modular size (in mm)	Specification
10 DS 21	D_1 4 No.	1000 × 2100	Flushed door
9 DS 20	D_2 3 No.	900 × 2000	Flushed door
12 WT 15	W_1 4 No.	1200 × 1500	Glazed window
10 WT 15	W_2 2 No.	1000 × 1500	Glazed window
10 V 6	V_1 2 No.	1000 × 600	Glazed ventilator
12 C B T 15	Cupboard	1200 × 1500	Flushed shutters



Figure

7. Draw the line diagram showing the functional requirement of a Hostel for 50 students capacity.

20
