

4429

**BOARD DIPLOMA EXAMINATION, (C-14)
JUNE-2019
DCE - FOURTH SEMESTER EXAMINATION**

BUILDING SERVICES DRAWING

Time: 3 Hours

Max. Marks : 60

PART-A

5x4=20M

Instructions: 1) Answer **all** questions. Each question carries **four** marks.

2) Any missing data may suitably be assumed.

- 1) Draw the plan of a water supply network diagram for a toilet.
- 2) Draw the pipe line network for a motor room.
- 3) Draw the conventional signs for the following items of Electrical fixtures.
 - (a) Ceiling Fan
 - (b) One - way Switch
 - (c) Immersion water heater
 - (d) Loud speaker outlet.
- 4) Draw the line diagram for a stair case wiring with two-way switch and indicate the component parts in it.
- 5) Draw the line diagram for a solar water heater system.

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PART-B

2x20= 40M

Instructions: 1) Answer all questions. Each question carries Twenty marks.

2) The drawing must be to the scale.

3) Any missing data may suitably be assumed.

6) Draw the plan and longitudinal section of a septic tank to a scale of 1:20 for the given specification:

- a) Internal Size = 1000mm x 3000mm
- b) Brick masonry wall thickness = 230mm
- c) Thickness of CC bed = 500mm
- d) CC offset for masonry walls = 200mm
- e) Depth of water = 900mm
- f) Free board = 350mm
- g) RCC Roof panels = 100mm thick and 400mm wide fitted with bent handles for lifting.
- h) Scum board = RCC precast slab 75mm thick fixed at a height of 300 mm from floor level and extending up to a height of 150mm below roof. This shall be fixed at a distance of 750mm from inside of wall at inflow end into a groove of 75mm deep.
- i) Baffle wall = RCC precast slab 75mm thick kept on floor at a distance of 600mm from inside of wall at outflow end. The top of baffle shall be 150mm below water level.

- j) Inflow and outflow pipe = 100mm diameter T Shaped pipes.
- k) Vent pipe = 50mm diameter AC pipe with a cowl extending to a height of 2m above ground level.
- l) Masonry pedestal = 450mm diameter circular brick masonry pedestal shall be provided around the vent pipe up to ground level.
- m) General Ground level = 300mm above top of RCC precast roof panels.
- 7) Draw the sectional elevation of a lift shaft for a multistoried building to a suitable scale.
- a) Depth of pit = 1.20m
- b) Floor to floor height = 3.0m
- c) Top floor height = 2.40m
- d) R.C.C Slab thickness = 180mm
- e) R.C.C wall thickness = 150mm
- f) Size of machine room = 2.40m x 2.15m
- g) Size of lift car, inside = 900mm x 1200mm
- h) Size of lift room = 1500mm x 2000mm
- i) No.of floors = 5
- j) Lift entrance = 780mm

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