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C14–C–407

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BOARD DIPLOMA EXAMINATION, (C–14)

SEPTEMBER/OCTOBER - 2020

DCE—FOURTH SEMESTER EXAMINATION

BUILDING SERVICES DRAWING

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 a water supply connection to a residential building from a Municipal water main (not to scale).

2. Draw the Wiring diagram with connections of the distribution board (not to scale).

3. Draw the conventional signs for the following terms :
(a) CupBoard
(b) Almirah
(c) Stairs
(d) Pump

4. Draw a diagram showing the one way switch diagram with wiring diagram (not to scale).

5. Draw the conventional signs of Mechanical Engineering items of the following :
(a) Humidifier
(b) Damper
(c) Filter
(d) Air Cooler

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. Draw the plan and longitudinal section of a septic tank to a suitable scale from the given specifications :

Internal dimensions = 900 mm × 2750 mm

Brick masonry wall thickness = 230 mm

Thickness of CC bed = 500 mm

CC offset for masonry walls = 300 mm

Depth of water = 1000 mm

Free board = 300 mm

RCC roof panels =

100 mm thick and 450 mm wide fitted with bent handles for lifting

Scum board =

RCC precast slab 75 mm thick fixed at a height of 300 mm from flood level and extending up to a height of 150 mm below roof. This shall be fixed at a distance of 900 mm from inside of wall at inflow end into a groove of 75 mm depth.

Standing baffle =

RCC precast slab 75 mm thick kept on floor at a distance of 600 mm from inside of wall at outflow end. The top of baffle shall be 150 mm below water level.

Inflow and outlet pipe = 100 mm dia. Tee shaped pipes

Vent pipe =

50 mm dia. AC pipe with a cowl extending to a height of 2·0 m above GL

Masonry pedestal =

450 mm dia. circular brick masonry pedestal shall be provided around the vent pipe up to GL.

7. Draw the typical layout of a solar water heating system to suitable scale.

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