C14-C-**407**

4424

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DCE - IV SEMESTER EXAMINATION

BUILDING SERVICES DRAWING

Time : **3** Hours] [Total Marks : **60**

PART - A **5 × 4 = 20**

Instructions : *(1) Answer **ALL** questions.*
*(2) Each question carries **FOUR** marks.*
(3) Drawing should be neat and clear with the necessary dimensions.
(4) All dimensions are in mm.

1 Draw the symbols for the following : **4×1=4**

(a) Wash Basin (b) Cooking Platform

(c) Bath Tub (d) Kitchen Sink

2 Draw the symbols for the following electrical engineering symbols as per I.S.I standards : **4×1=4**

(a) Exhaust Fan (b) One Way Switch

(c) Two Way Switch (d) Power Plug

3 Draw the wiring diagram of a two way switch connections for 2 lamps and one wall socket. **4**

4 Draw the plan of rain water harvesting pit of size $1\,m \times 1.2\,m$ for a residential building. Assume brick masonry of $230\,mm$ thick. **4**

5 Draw a neat sketch of any one type of solar water heating system. **4**

PART - B 20×2=40

Instructions : *(1) Answer **ALL** questions.*
(2) Assume any missing data.
(3) Drawing should be neat and clear with the necessary dimensions.
(4) All dimensions are in mm.

6 Draw Electrical wire diagram of a residential (single bed room) building as shown in diagram. (Adopt scale 1 : 50) **10+10**

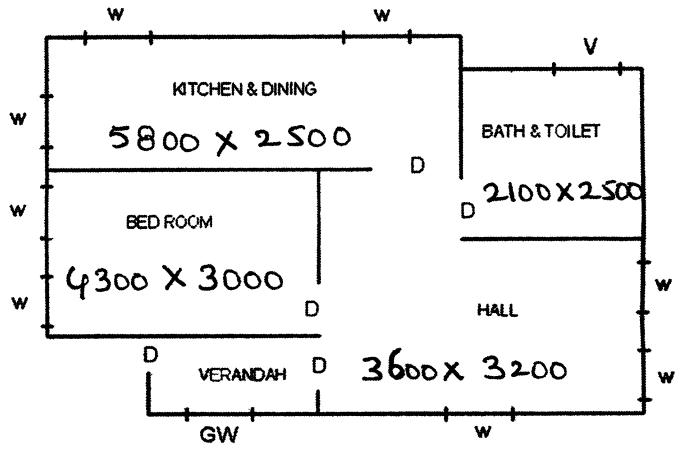
Verandah	2000 × 1200 mm wide
Hall	3600 × 3200 mm
Bed Room	4300 × 3000 mm
Kitchen & Dining	5800 × 2500 mm
Bath and Toilet	2100 × 2500 mm
All walls of superstructure	200 mm
D = DS	1000 × 2000 mm Flushed Door
D1 = DS	750 × 1800 mm Flushed Door
W = WT	1000 × 1200 mm Glazed Window
V = Ventilator	600 × 450 mm Glazed

Electrical Fittings

Outside the verandah	=	1 Bell Push, 1 Lamp
In the verandah	=	1 Fan, 1 Lamp, 1 Tube Light, One 5 Amp Socket Outlet
In the hall	=	1 Fan, 1 Lamp, 1 Tube Light, Two No's 5 Amp Socket Outlet
In Bedroom	=	1 Fan, 1 Lamp, 1 Tube Light One 5 Amp Socket Outlet
In Bath & Toilet	=	1 Lamp, 1 Exhaust Fan, One 5 Amp Socket Outlet
In Kitchen & Dining	=	1 Fan, 2 Lamps, 1 Tube Light 1 Exhaust Fan, 2 No's 5 Amp socket outlet, One 15 Amp socket outlet

Number of Circuits/Switch Boards = 3

Circuit/Switch Board 1 & 2 are meant for Fans, Lighting and 5 Amp socket outlets Circuit/Switch Board 3 is to draw power for 15 Amp socket outlets.



7 Draw the plan and sectional elevation of the lift to a scale of 1 : 50 with the following dimensions : **20**

Plan dimension of the shaft	1.5 × 1.8 m
R.C.C. wall thickness	150 mm
Size of the lift car	1.3 × 1 m
Collapsible Gate	760 mm wide, 2100 mm height
Size of Lift pit	1.3 m below ground level
No. of floors	5 Floors
Height of machine room	2.135 m
Floor Slab Thickness	150 mm
Floor Height	3.3 m
Size of collapsible gate and ht of Lift car	2.1 m
Location of bottom slab of head room	0.65 m from top of top floor slab

Provide suitable RCC blocks, counter weights etc. Assume any missing data suitably.
