Register No.: [ ]

346

April 2023

Time – Three hours
(Maximum Marks: 100)

N.B.
1. Answer all questions under Part-A and Part-B in the drawing sheet supplied.
2. Q.No. 1 & 2 each carries 4 marks, Q.No 3 carries 12 marks and Q.No. 4 carries 80 marks.
3. Sketches under Part-A shall be drawn using pencil and drawing instruments not necessarily to scale.
4. Any data not given may be assumed suitably and shall be indicated in the drawing.
5. All dimensions indicated are in "mm".

PART – A

1. What is meant by (i) Site plan and (ii) Key plan?
2. Mention any four facilities to be provided in an industry.
3. Draw the elevation of a "flush door" for the following details. Assume any other data suitably. (All dimensions are in mm)

Size of door	-	1200 x 2100
Door frame size	-	75 x 100
Panel	-	25 mm thick

[Turn Over...

PART – B

4. The sketch "A" shows the line plan of "A small work shop with north light steel roof truss, over R.C.C. columns". The dimensions noted in the line plan are clear dimensions between the walls. The specifications are given below.

Specification

1. Foundation
   (a) Depth of excavation shall be 2200 below Ground level. Sand filling shall be provided below the levelling course concrete to a thick of 200. For all columns levelling course in plain cement concrete 1:5:10, 1800×1200×200 laid at 1500 below ground level.
   (b) Footing in R.C.C 1:1.5:3 shall be uniformly varying thickness at end 300 thick, at face of the column 500 thick.
   (c) Plinth beam shall be provided to a size 300×450 at below the ground level with R.C.C. 1:1.5:3 mix in between the columns.
   (d) Above the plinth beam basement shall be 230 wide and 600 height.
   (e) Inside the basement quarry dust /sand filling shall be 450.

2. Super structure: All the columns are in R.C.C. and size 400×230 mm. 3600 high and 3600 c/c. Brick walls shall be provided in between columns to a thickness of 230 and 3600 height. All the walls and columns are plastered with cm 1:4 externally and 1:5 internally for 12.5 thick. Sand shall be filled inside the floor area below G.L. to a thick to 400

3. Roofing: The roofing shall be of metal colour roofing sheets of thickness 1.00 laid over necessary purlins on north light roof truss. The trusses shall be spaced at 3600 c/c. There are five Bays in the workshop.

4. Truss: North light roof truss Top members and tie beams shall be provided 2 nos. of ISA 80×80×8, all other members are ISA 80×80×8, vertical rise shall be ¼ of the span.

5. Lintel: All the external openings shall be provided with R.C.C. 1:1.5:3 lintel cum sunshade 150 thick and 600 wide. All other internal opening shall be provided with 150 thick RCC lintel 1:1.5:3 mix.

6. Flooring: The flooring concrete shall be in CC 1:3:6 mix,150 thick and top finished with Granolithic flooring in CC 1:2:4, 40 thick using 10 to 12 chips.

7. Ramp: Ramp shall be provided both in front and rear doors, length of ramp 2400, width 2000 and rise 450 at column face and end shall be level with ground.

8. Doors and windows

R – Rolling steel shutter	-	2400 x 2700
D – C.W.Panelled Door	-	1000 x 2100
W – Mild steel Glazed Window	-	1800 x 1800

Note:

1) All dimensions mentioned are in millimeters.
2) Assume any other dimensions if necessary and mention the same in the drawing.

Draw to a suitable scale the following views with required dimensions and details.

1. Plan at window sill level (30 Marks)
2. Sectional elevation on AA (30 Marks)
3. Front elevation (20 Marks)