

# B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

## August 2024 Semester End Main Examinations

**Programme: B.E.**

**Branch: Civil Engineering**

**Course Code: 23CV4ESBDC**

**Course: Building Drawing and CAD**

**Semester: IV**

**Duration: 4 hrs.**

**Max Marks: 100**

**Instructions:** 1. Unit I and Unit III is Compulsory. Answer any 1 question from Unit II  
2. Missing data, if any, may be suitably assumed.

| Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice. | UNIT – I         |   |  | CO   | PO  | Marks |
|--|------------------|---|--|------|-----|-------|
|  | 1                | Draw to suitable scale line plan of school building located at district place.  |  | CO 1 | PO2 | 20    |
|  | <b>UNIT – II</b> |   |  |      |     |       |
|  | 2                | Draw plan and sectional elevation of RCC dog legged staircase for an office building which measures 3m x 5.5m. The vertical distance between the floor is 3.3m (including landing). Thickness of the floor slab is 150mm. Provide steps with tread of 300mm and rise of 150mm. Thickness of waist slab and landing slab is 150mm. Width of stair is 1.5m.   |  | CO 2 | PO3 | 20    |
|  | <b>OR</b>        |   |  |      |     |       |
| 3  | a)               | Draw the elevation of the given steel roof truss (Fig 1) and show the connection details at joint A and E using the data given in figure.<br>i. 8mm thick gusset plate<br>ii. Use 2 numbers of 12φ HSFG bolts for each connection<br>iii. Truss is supported on a concrete column of size (500 x 500) mm<br>iv. Thickness of the base plate = 25mm<br>v. Anchor bolts of 450mm length and 25φ – 8 numbers at the connection of truss and column |  | CO 2 | PO3 | 20    |
| <b>UNIT – III</b>  |                  |   |  |      |     |       |
| 4  |                  | Figure no. 2 shows a line plan of a residential building. Draw to suitable scale the following views, show all dimensions and label the parts.<br>a) Developed plan    b) Front elevation    c) Section XX  |  | CO 2 | PO3 | 60    |

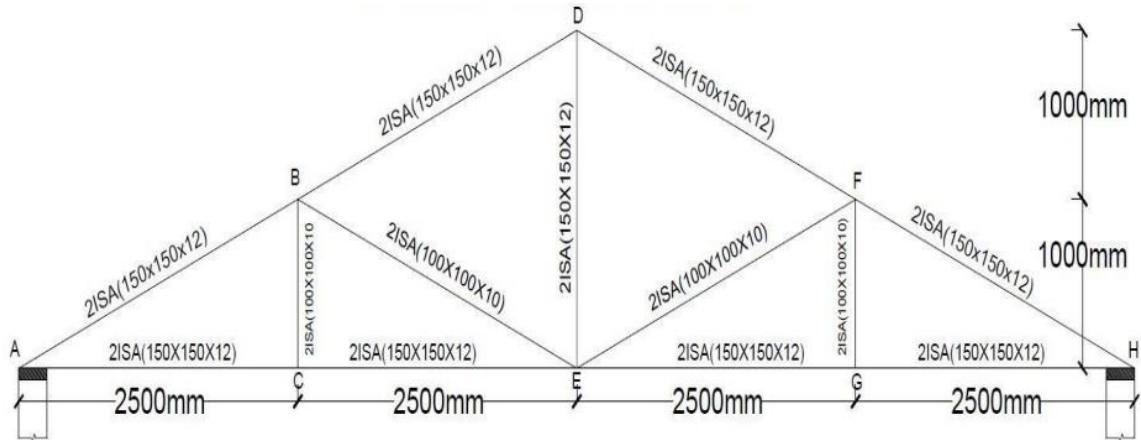


Figure 1: Line Diagram for Steel Truss

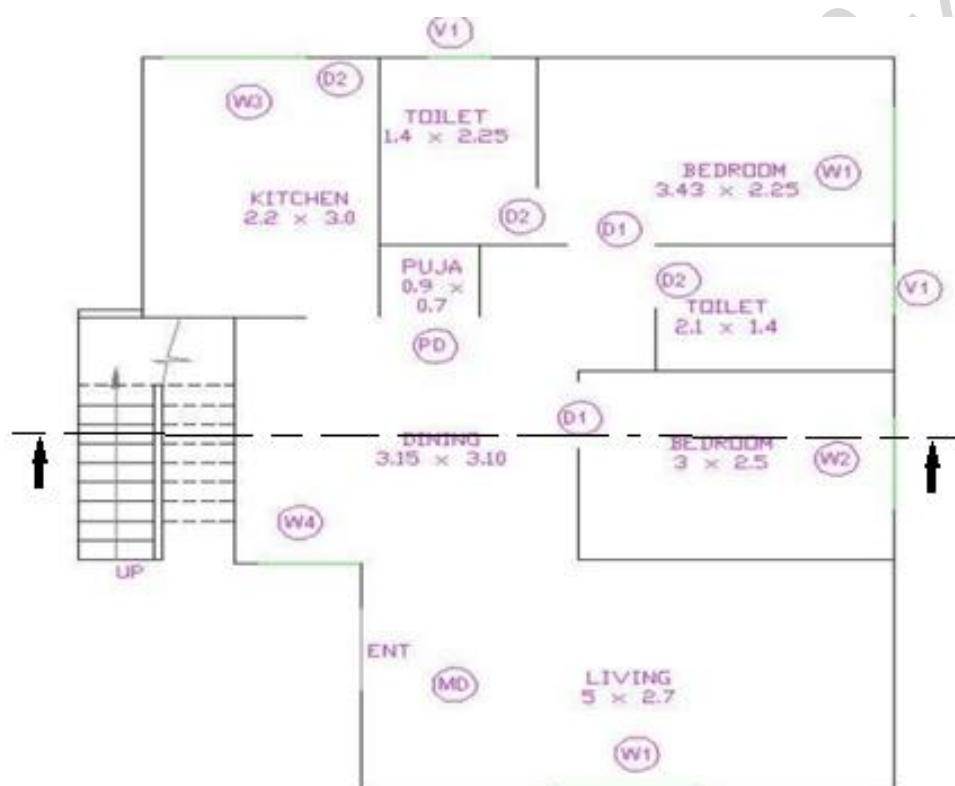


Figure 2 : Plan of Single Storey Building

Where,

|                    |                   |
|--------------------|-------------------|
| MD – 1.1m x 2.1m   | W1- 1.5m x 1.35m  |
| D1 – 0.9m x 2.1m   | W2- 1.2m x 1.35m  |
| D2 – 0.75m x 2.1m  | W3- 1.45m x 1.00m |
| PD – 0.90m x 2.1m  | W4- 1.05m x 1.35m |
| V1 – 0.60m x 0.60m |                   |

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