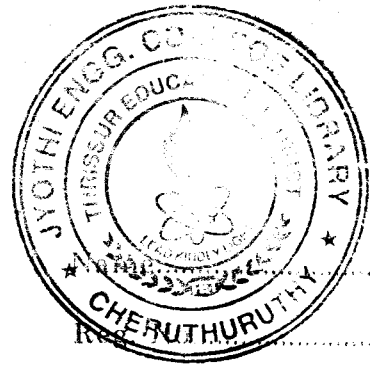C 1251

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FOURTH SEMESTER B.TECH. (ENGINEERING) [14 SCHEME] DEGREE
EXAMINATION, APRIL 2016

CE 14 407 (P/D)—CIVIL ENGINEERING DRAWING—I

Time : Three Hours

Maximum : 100 Marks

Part A

Answer any *two* from the following :—

1. Draw the front elevation, sectional plan and vertical section of a laminated 25 mm. thick particle board door. Use the following data :

    (a) Size of door = 1200 mm. × 2550 mm.

    (b) Thickness of laminated board = 25 mm.

    (c) Size of Chowkhat, *i.e.*, Frame = 110 × 80 mm.

    (d) Thickness of wall = 200 mm.

    (e) Thickness of R.C.C. Lintel over door = 180 mm.

    The frame is flushed with the exterior of the wall and covered with a moulding of size 30 × 15 mm.

2. Draw to a suitable scale the ridge joint of a steel roof truss from the following data :

    (a) Principal rafter = ISA 60 × 60 × 6 mm. inclined at 30° to the horizontal

    (b) Upper tie = ISA 65 × 65 × 6 mm. inclined at 60° to the horizontal

    (c) Gusset plate = 8 mm. thick

    (d) Diameter of rivets = 12 mm.

    Use your own sizes for cleats, purlins, asbestos sheets and ridge cover. Use suitable number of rivets and pitch.

3. A staircase is needed to connect two floors separated by 3.20 m. height. The going space available is 4.30 m. Draw a detailed sketch of the stair from the following data, if the floors are of a residential building.

    (a) Stair consists of two flights.

    (b) Each flight has 8 treads and 9 risers.

    (c) Tread = 250 mm, Rise = 186 mm.

    (d) Width of landing 1.2 m.
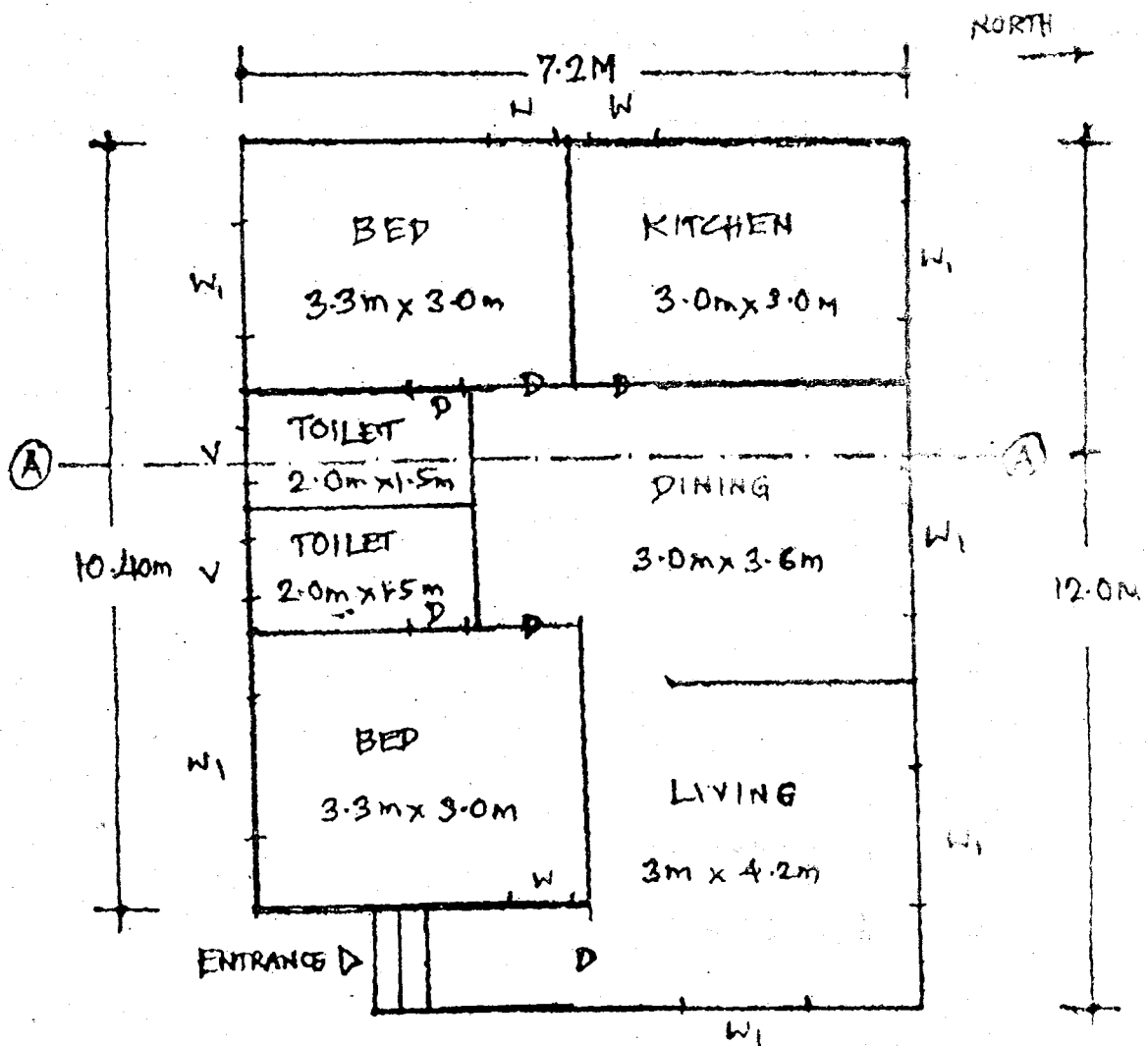
(2 × 15 = 30 marks)

Turn over

Part B

Answer the following :—

4. Draw the plan, elevation and sectional elevation for the line diagram of the building shown in figure below. Also write the schedule of openings.

    (a) Plan of the building.   (30 marks)

    (b) Elevation.   (15 marks)

    (c) Section along A-A.   (15 marks)

    (d) Schedule of openings.   (10 marks)

(1 × 70 = 70 marks)