

Third Semester B.E Degree Examination, December 2019
(CIVIL ENGINEERING)

COMPUTER AIDED BUILDING PLANNING AND DRAWING

Time: 3 Hours

Max. Marks: 100

NOTE:

1. Answer any *TWO* full questions from PART A and any *ONE* full question from PART B.
2. Assume any missing data suitably.

PART A

- Q1. Draw the elevation of the given steel roof truss and show the connection details at joint A and E using the data given in **Fig Q.1.**
- i. 8mm thick Gusset plate
 - ii. Use 2# of 12mm ϕ HSFG bolts for each connection
 - iii. Truss is supported on concrete column of size (500mm x 500mm)
 - iv. Thickness of Base plate= 25mm
 - v. Anchor bolts of 450mm length and 25mm ϕ – 8# @ the connections of truss and Column. (25 Marks)
- Q2. Draw to scale the elevation and cross section of English bond and Flemish bond with all the details for 10 courses. (25 Marks)
- Q3. A simply supported two-way slab is supported on all sides by using 230mm thick wall. The dimensions of two-way slab are 3m x 4m (clear). Following are the reinforcement details:
 Along shorter span: 10mm ϕ @ 125mm c/c,
 Along longer span: 10mm ϕ @ 150mm c/c
 Thickness of slab is 150mm
 Draw plan showing reinforcement and cross section along longer and shorter span. (25 Marks)
- Q4. Draw the longitudinal section, cross section of a rectangular simply supported RCC beam with the following data:
 Clear span = 4.5m
 Bearing at the supports = 230mm
 Width of beam = 300mm
 Overall depth of beam = 450mm
 Main reinforcement consists = #5 - 16 ϕ bars with 2 bars bent up at L/7 from center of support
 Anchor/hanger bars #2 - 10 ϕ
 Stirrups: 2L 8 ϕ @ 180mm c/c. (25 Marks)

PART B

- Q5. The line diagram of a residential building is given in FigQ5. Draw to scale the following:
- a. Plan at sill.
 - b. Front Elevation.
 - c. Section along XX.
 - d. Schedule of openings. (50 Marks)

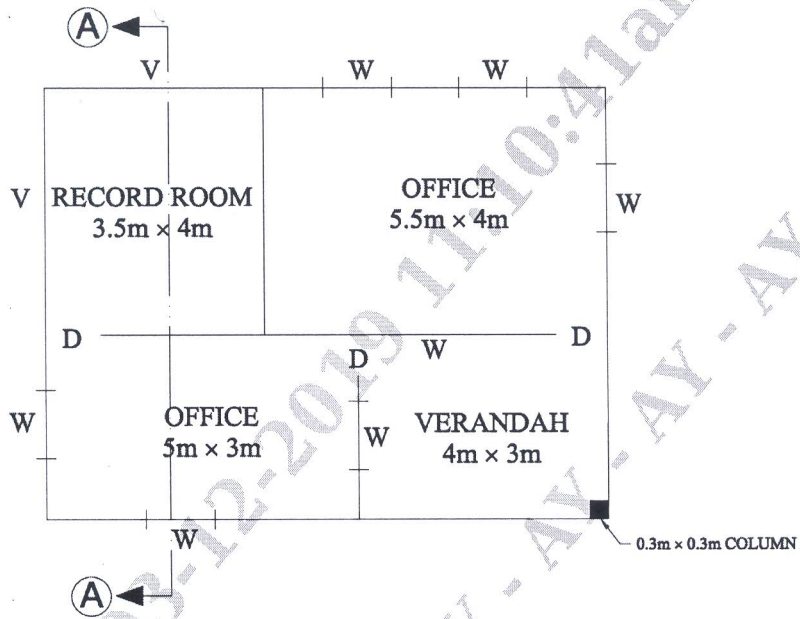


Fig.Q6