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**Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
(CIVIL ENGINEERING)**

COMPUTER AIDED BUILDING PLANNING AND DRAWING

Time: 3 Hours

Max. Marks: 100

- Note: 1. Answer any *TWO* full questions as per INTERNAL CHOICE.
2. Assume any missing data suitably.

Q1. A simply supported two way slab is supported on all sides by using 230mm thick wall. The dimension of two-way slab is 3m x 4m (Clear). Following are the reinforcement details:
Along shorter span: $10\phi @125$ c/c. Along longer span: $10\phi @150$ c/c.
Negative steel for shorter span: $10\phi @250$ c/c. Negative steel for longer span: $10\phi @300$ c/c.
Alternative bars are cranked. Corner mats are $8\phi @150$ c/c along shorter span and $8\phi @200$ c/c along long span. Thickness of slab is 150mm.
Draw plan showing reinforcement and cross section along longer & shorter Plan of the slab showing the reinforcement details. **(40 Marks)**

OR

Q2. Draw the cross section and Plan of a RCC dog legged stair for a building having the following details.
Clear stair hall size 2.5X4.5m, width of landing 1.2m, width of each flight 1.2 m,
Rise=150mm, Tread=150mm, Thickness of waist slab = 150mm Floor to floor height 3.6m. **(40 Marks)**

Q3. The line diagram of a residential building is given in **Fig Q.3**. Draw to scale the following:
a. Plan at sill level.
b. Front elevation.
c. Section along XX.
d. Schedule of openings. **(60 Marks)**

OR

Q4. The line diagram of an Executive Engineers office building is given in **Fig Q.4**. Draw to scale the following:
a. Plan at sill level.
b. Front elevation.
c. Section along XX.
d. Schedule of openings. **(60 Marks)**

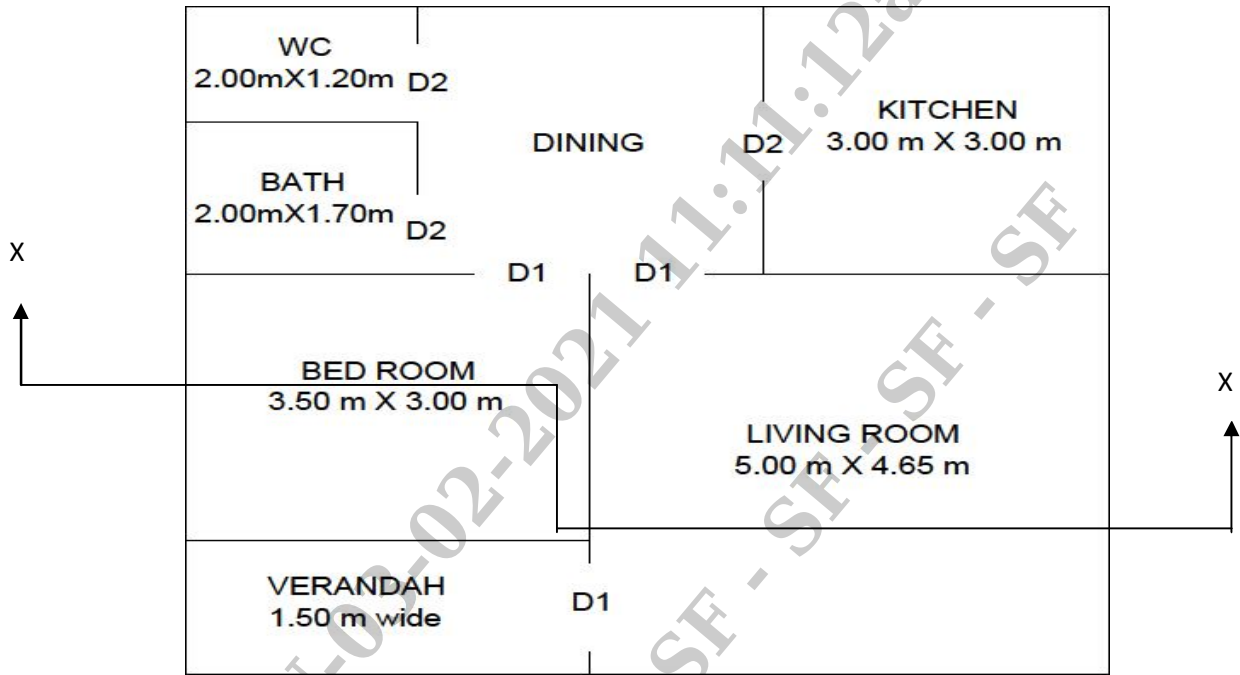


Fig Q.3

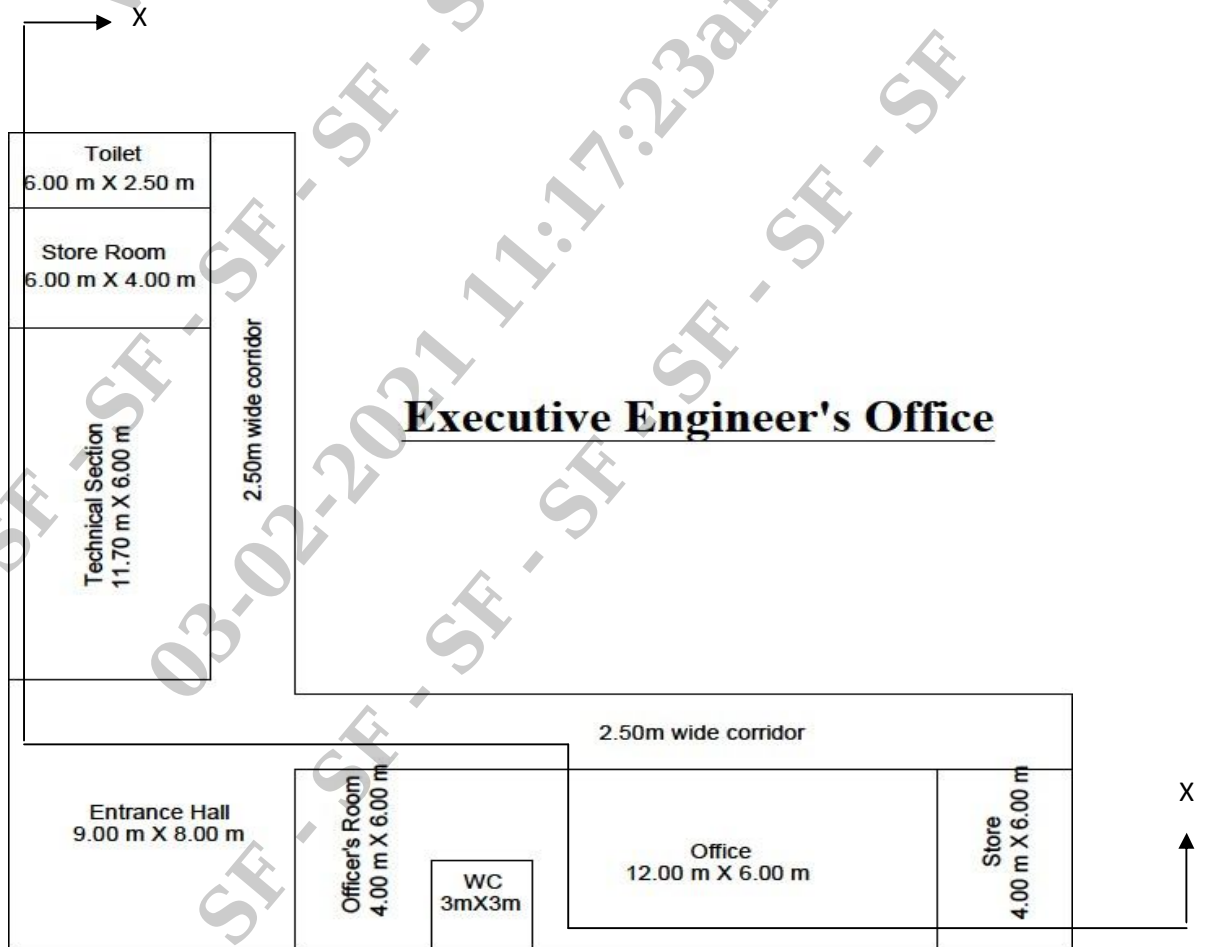


Fig Q.4