

USN

--	--	--	--	--	--	--	--	--	--

**Fifth 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 as per INTERNAL CHOICE.
2. Assume any missing data suitably.

Q1. Draw plan and sectional elevation of an open newel stair with a rectangular well for an office building with the following data:

Inside dimensions of staircase = 4.5m x 5.4m.

Height between the floors is 3.6m.

Thickness of the floor slab and landing slab is 150mm.

Width of landing=1.5m.

Width of stair = 1.5m.

Tread=300mm, riser=150mm.

Waist slab thickness = 150mm.

Reinforcement details: Main steel: 12 ϕ @150 c/c spacing and Distribution: 8 ϕ @ 250 c/c spacing. (40 Marks)

OR

Q2. Draw cross section and plan of one way roof slab showing the details of reinforcement for the following data:

Clear span = 4m

Length of slab = 10m

Thickness of slab = 130mm

Bearing wall = 200mm

Main reinforcement: 12 ϕ @ 250 c/c with alternate bars bent up.

Distribution reinforcement: 8 ϕ @ 200 c/c. (40 Marks)

Q3. The line diagram of a residential building is given in Fig Q3. Draw to scale the following. Given main wall 230 mm thick, partition wall = 100 mm, floor height = 3.0 m

- Plan at sill.
- Front Elevation.
- Section along A-A.
- Schedule of openings.

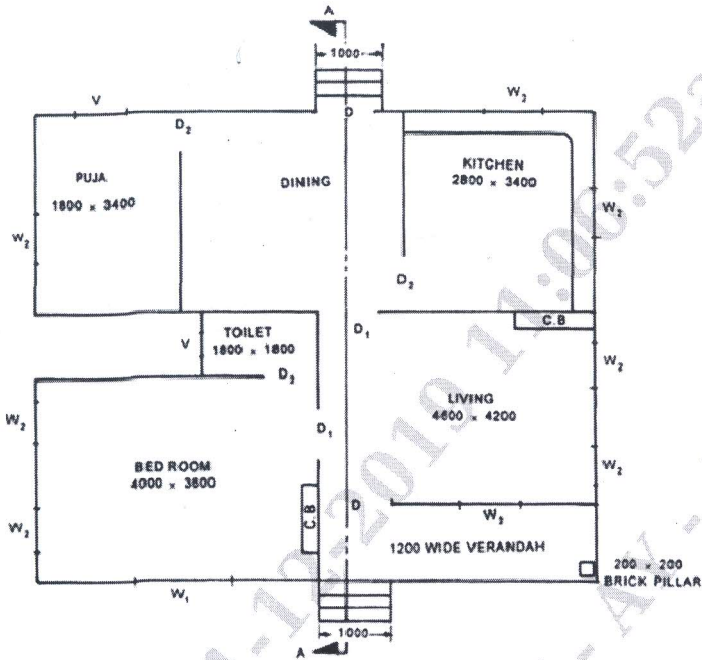
(60 Marks)

OR

Q4. The line diagram of a School building is given in Fig Q4. Draw to scale the following.

- Plan at sill.
- Front Elevation.
- Section along A-A.
- Schedule of openings.

(60 Marks)



SCHEDULE	
D	= 1 X 2.1 m
D1	= 1 X 2.0 m
D2	= 0.9 X 1.8 m
W1	= 1.5 X 1.2 m
W2	= 1 X 1.2 m
C.B	= 1.5 X 1.8 m
V	= 1 X 0.6 m

Fig Q3

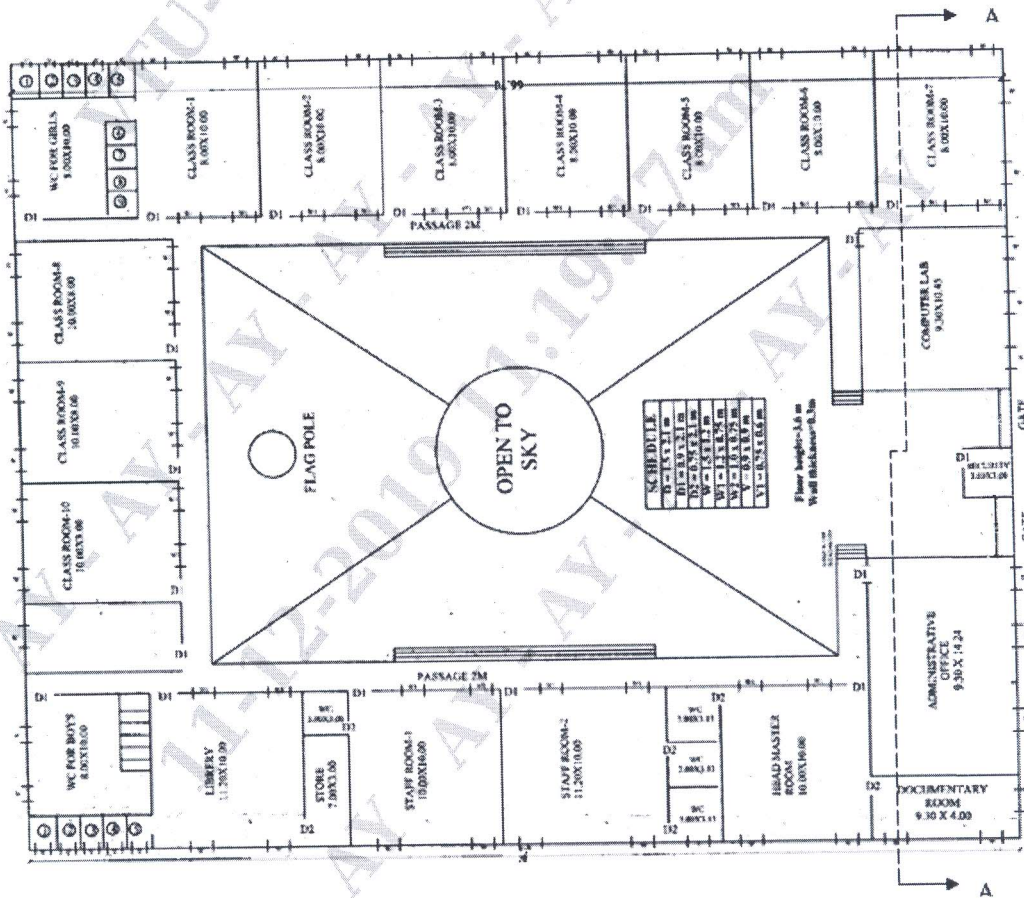


Fig Q4