USN | | | | | | | | | | 18CVL37

Third 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 from **PART A** and any *ONE* full question from **PART B**.
2. Assume any missing data suitably.

PART A

Q1	Draw the plan and Section elevation for a septic tank for the following details. Depth of tank = 1.75m. Length of PCC bed 4.7m, width of PCC bed 1.9m, Thickness of PCC bed 0.15m. Width of tank wall in brick work above PCC bed=0.4m for a height of 0.4m Width of tank wall in brick work=0.3m for a height of 0.5m Width of tank wall in brick work=0.2m for a height of 0.7m. The tank consists of a RCC pre cast slab of thickness 7.5cm Also show the provision for inlet and out let pipes. **(25 Marks)**

Q2	A square RCC column 450X450 mm is resting on a sloped RCC square footing .The depth of foundation is 1.5 m below the ground level. The size of footing is 1400 ×1400mm. The depth of footing is reduced to 750 mm at the face of column to 300 mm at the edge of the footing. The column reinforcement consist of 8 bars of 20mm dia, with 2 legged 8 mm dia stirrups at 200 mm c/c and the footing reinforcement consist of 12 mm dia bars @ 150 mm c/c both ways .Draw to scale the following.
	  a) Plan of the footing showing the reinforcement details.
	  b) Vertical section of the column with footing
	  c) Cross section of column. **(25 Marks)**

Q3	Draw the scale the elevation and cross section of English bond and Flemish bond with all the details for 10 courses. **(25 Marks)**
Q4	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 1.2m, Rise=150mm , Tread=150mm,Thickness of waist slab = 150mm Floor to floor height 3.6m. **(25 Marks)**

PART B

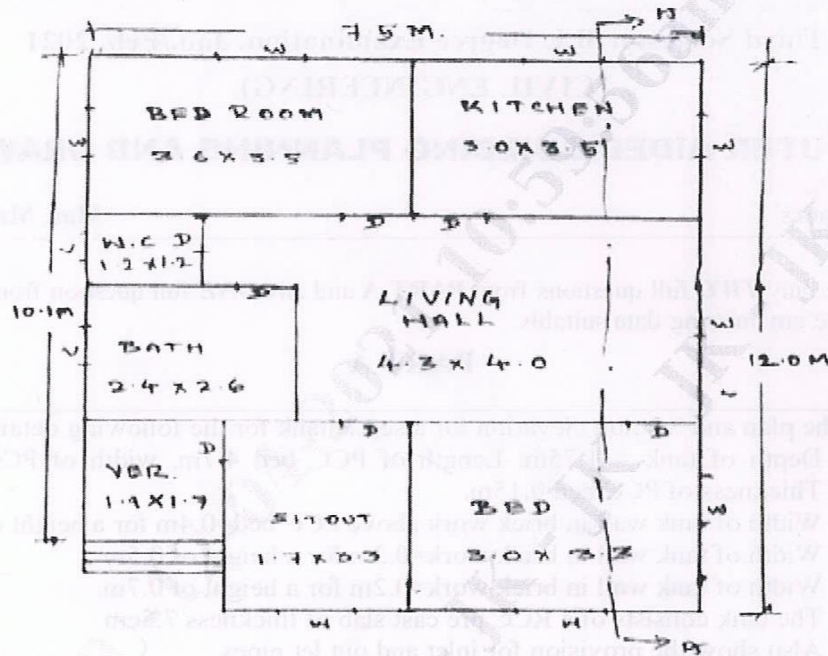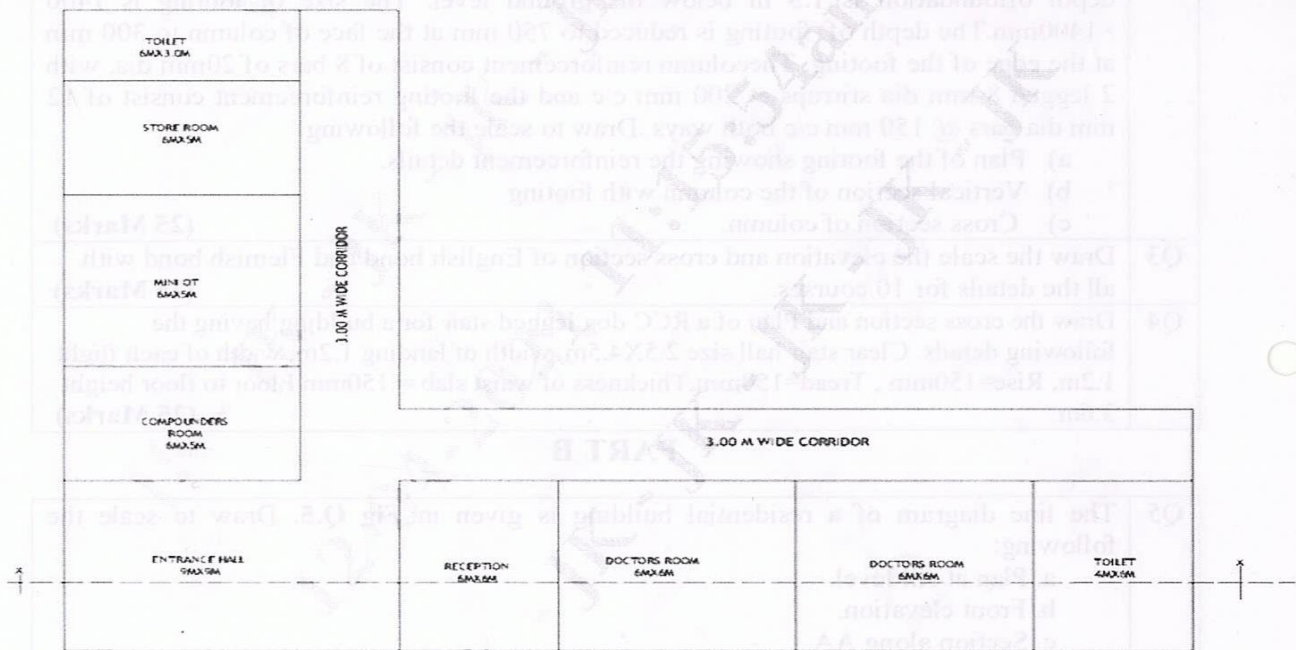| Q5	The line diagram of a residential building is given in **Fig Q.5.** Draw to scale the following:
	  a. Plan at sill level.
	  b. Front elevation.
	  c. Section along AA.
	  d. Schedule of openings. **(50 Marks)**

Q6	The line diagram of Hospital building is given in **Fig Q.6.** Draw to scale the following:
	  a) Plan at sill level.
	  b) Front elevation.
	  c) Section along XX.
	  d) Schedule of openings. . **(50 Marks)**

Figure Q 5.

Figure Q 6

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