CBCS SCHEME

USN | | | | | | | | | | |

15CV54

Fifth Semester B.E. Degree Examination, December 2018
(CIVIL ENGINEERING)
COMPUTER AIDED BUILDING PLANNING AND DRAWING

Time: 3 Hours | Max. Marks: 80

Note: Answer any ***TWO*** full questions. Assume any missing data suitably.

Q1. A square RCC column 450X450 mm is resting on a sloped RCC square footing. The depth of foundation is 1.3 m below the ground level. The size of footing is 1400X1400mm. Thickness of PCC bed is 150mm.The depth of footing is reduced to 650 mm at the face of column to 250 mm at the edge of the footing. The column reinforcement consist of 6 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 @ 125 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.

(30 Marks)

OR

Q2. A One way slab for a hall of internal dimension 7.0 m x 11.77m has the following details:

a. Thickness of slab=150mm
b. Wall thickness =230mm
c. Mail steel along short span =10 mm #@100mm c/c
d. Distribution steel=8 mm #@150mm c/c

Draw to suitable scale the following

1. Plan showing the reinforcement details
2. Cross section of slab @mid span along short span
3. Cross section of slab @mid span along long span

(30 Marks)

Q3. The line diagram of a residential building is given in Fig Q3. Draw to scale the following :

a. Plan at sill.
b. Front elevation.
c. Section along AA'.
d. Schedule of openings.

(50 Marks)

OR

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

a. Plan at sill.
b. Front elevation.
c. Section along XX.
d. Schedule of openings.

(50 Marks)

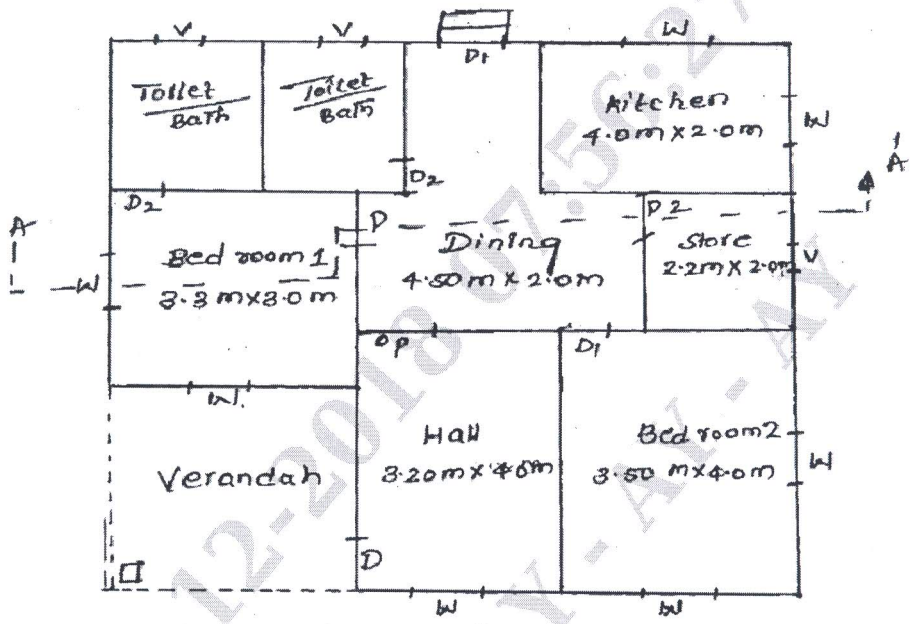
Toilet Bath
Toilet Bath
Kitchen
4.0m x 2.0m
Bed room 1
3.3m x 3.0m
Dining
4.50m x 2.0m
Store
2.2m x 2.0m
Verandah
Hall
3.20m x 4.0m
Bed room 2
3.50 m x 4.0m

Fig. Q3

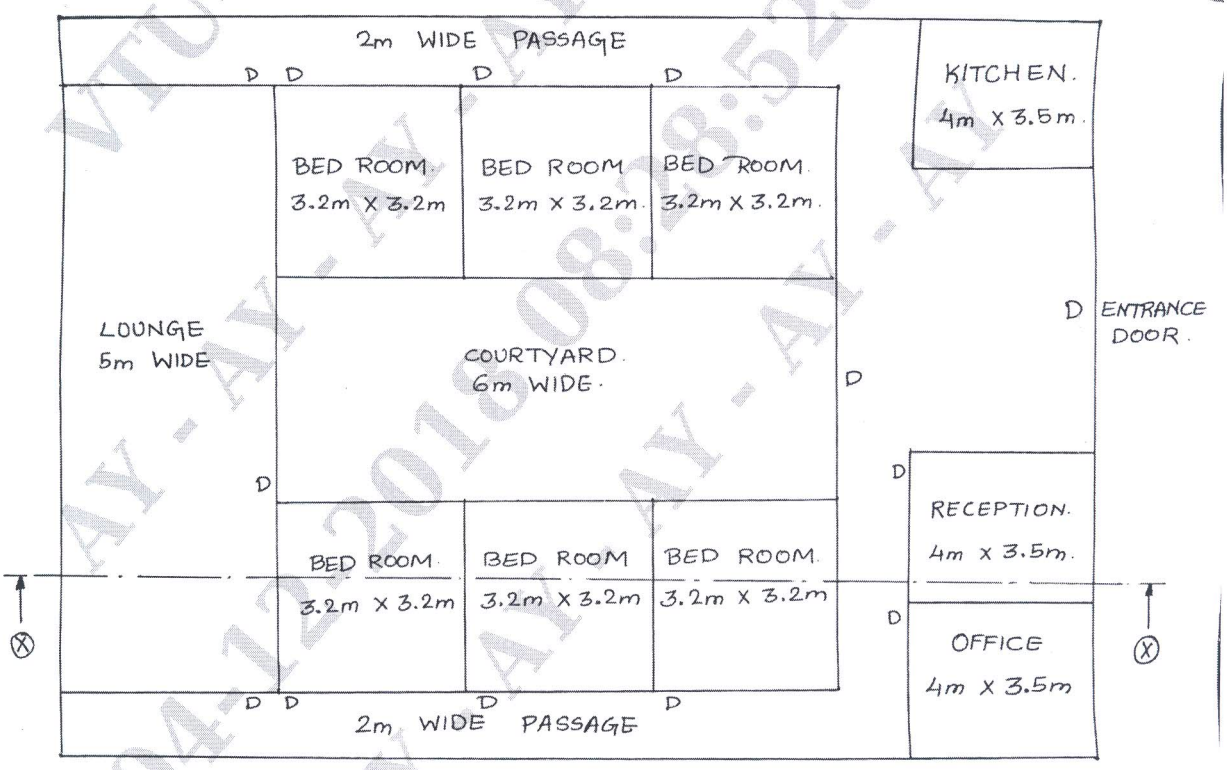
2m WIDE PASSAGE
BED ROOM
3.2m x 3.2m
BED ROOM
3.2m x 3.2m
BED ROOM
3.2m x 3.2m
KITCHEN.
4m x 3.5m.
D ENTRANCE DOOR.
LOUNGE
5m WIDE
COURTYARD
6m WIDE.
RECEPTION.
4m x 3.5m.
OFFICE
4m x 3.5m
2m WIDE PASSAGE

Fig. Q4