

TED (10)–4001

(REVISION—2010)

Reg. No.

Signature

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2014

BUILDING PLANNING AND DRAWING

(Common for CE, QS, EN and WR)

[Time : 3 hours

(Maximum marks : 100)

- [Note :—1. Question Number II is compulsory.
2. Missing data if any can be suitably assumed.
3. Drawing should be neat and fully dimensioned
4. A2 size drawing sheet to be supplied.
5. Sketch on 4th page.]

Marks

PART—A

(Maximum marks : 15)

- I Answer the following questions in one or two sentences. Each question carries 1½ marks.
1. Distinguish between couple closed roof and single collar roof.
 2. In which situation the fully glazed or half glazed and panelled doors are used.
 3. Differentiate between plinth area and carpet area.
 4. What are the importance of orientations of building ?
 5. What is the approximate area and cubic space requirement of a residential building per head ?
 6. Distinguish between hip roof and gable roof.
 7. Define bridge and culvert.
 8. What is depth of plot in KMBR ?
 9. Define basement floor.
 10. Distinguish between coverage and FAR.

(10x1½=15)

PART—B
(Maximum marks : 85)

- II (a) Develop a line plan of a two bedroom with adherence to NBC and KMBR the residence should meet the following requirements approximately with the following area :

Bed rooms	: 15m ² each
Drawing rooms	: 16m ²
Dining	: 16m ²
Study/Guest bed	: 11m ²
Kitchen	: 12m ²
Work area	: 5m ²
Sit out	: 5m ²
Three attached toilet	: 4m ² each
Store	: 5m ²

The size of the plot is 17m × 20m abutting a front side road of 6m wide.

25

- (b) The line plan shown in figure 1 is a twin house. draw the :

(i) plan

(ii) section along AA to a scale of 1 : 100

Foundation	(i) PCC 1 : 4 : 8 mix, 10cm thick
	(ii) RR masonry 50 × 100cm
Basement	: RR masonry 40cm × 45cm
Wall	: Brick work in cm 1 : 8, 24cm thick
Roofing	: RCC flat 1 : 2 : 4 mix, 10cm thick
Hight of wall	: 300cm
Lintels and sunshade	: RCC 1 : 2 : 4, 24cm × 15cm for lintel and sunshades 8cm thick.

(15+15)

- III Draw the a suitable scale the elevation and sectional plan of a fully panelled door (double shutter) with the following specifications :

Size of door	: 100cm × 20cm
Size of frame	: 9cm × 7cm
Style	: 9.5cm × 3.5cm
Kick rail	: 15cm × 3.5cm
Lock rail	: 15cm × 3.5cm
Mid rail	: 9.5cm × 3.5cm
Top rail	: 8.5cm × 3.5cm
Top panels	: 25.5cm × 61cm × 2cm
Middle panels	: 25.5cm × 28cm × 2cm
Bottom panels	: 25.5cm × 55cm × 2cm

Provide hold fasts at suitable location.

15

OR

IV The details of couple close roof are given below. Draw the cross sectional elevation to the following specifications :

Effective span	:	4m
Wall thickness	:	30cm
Rafter	:	5cm × 12.5cm
Tie joist	:	4cm × 15cm
Ridge piece	:	8 × 20cm
Wall plate	:	15cm × 7.5cm

15

V Draw the half sectional plan of the RCC slab colvert with the following specifications :

Span	:	350cm
Bed level	:	+97.00m
Foundation level (bottom)	:	+95.70m
Road level	:	+100.00m
Foundation concrete	:	20cm thick
Thickness of abutment	90 cm for 160cm height and 75cm for remaining 160cm	
Thickness of slab	:	40cm
Thickness of wearing coat	:	10cm
Projection of returned wing wall in 300cm ; 90 degree with abutment wall size of returned wing wall is same as that of abutment wall.		
Height of parapet	:	90cm.

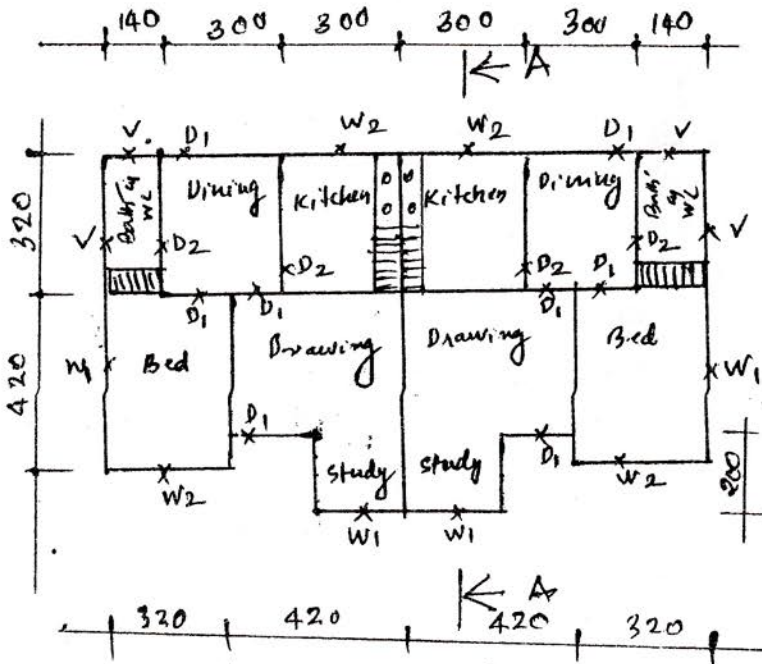
15

OR

VI Draw the drainage plan of the building shown in the line plan (figure No. 2).

15

Q.N. II (b)



Index :

- D₁ - Door 100 cm x 200 cm
- D₂ - " 80 cm x 200 cm
- W₁ - Window 150 cm x 120 cm
- W₂ - " 100 cm x 120 cm
- V Ventilator 100 cm x 60 cm
- J Jutting wall

center line plan

All dimensions are in cm

Wall thickness 24 cm

Fig 1 Twin House

Q.N. VI

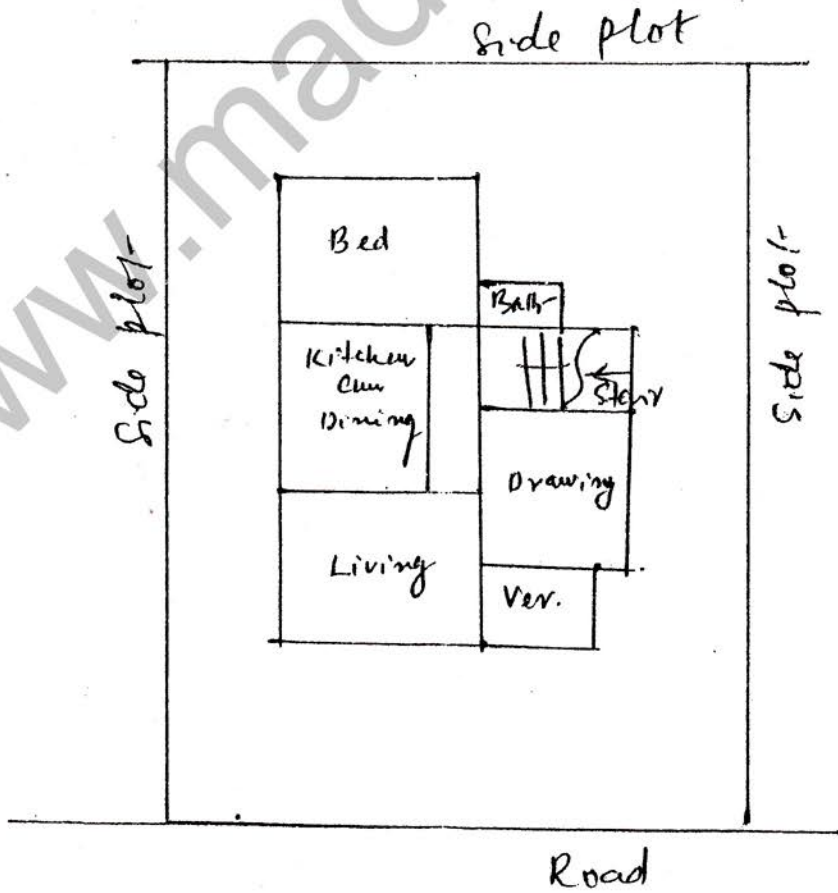


Fig. 2 (Q.N. Ho. VI)