

TED (10)–4001

Reg. No.

(REVISION—2010)

Signature

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2013

BUILDING PLANNING AND DRAWING

(Common for CE, QS, EN and WR)

[Time : 3 hours

(Maximum marks : 100)

- [Note : 1. Question No. II is compulsory.
2. Missing data can be suitably assumed.
3. Drawing shall 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 *all* questions in one or two sentences. Each question carries 1½ marks.
1. Define carpet area of a building.
 2. Define 'Mezzanine' floor.
 3. In which situation the building rules are applicable in an area ?
 4. What are the documents submitted while applying a building permit in a municipality ?
 5. List two specifications to prepare a service plan as per KMBR.
 6. List the different types of windows.
 7. List the minimum parking space of motor car, scooter and cycles.
 8. In which situation double collar roof is recommended ?
 9. What are the different types of culverts used in the civil engineering works ?
 10. Who are the persons to sign the building planning drawings and specifications ?
- (10×1½=15)

PART—B

(Maximum marks : 85)

- II (a) Prepare the line plan of an office building according to N.B.C. and KMBR requirements :

Approximate area for rooms given below :

Officer's room	–	16m ²
Office room	–	28m ²
Records room	–	9m ²
Waiting area	–	12m ²

Front and rear varandah, toilets are also provide suitably. Plinth area should not exceeding 85m². Plot area 18 × 16 m and 6 m road abutting along the northern boundary.

25

- (b) The line plan shows the layout of a residential building given in figure 1. (4th page). Develop the following dimensioned drawing. Marks

Specifications :

Foundation – RR masonry in cm 1 : 8 – 60 cm × 90 cm.

Basement – RR masonry in cm 1 : 8 – 45 cm × 45 cm.

Super structure :

Brick in cm 1 : 6 , 20 cm thick and 300 cm height.

Roofing :

R.C.C. Slab 1:2:4 12 cm thick

Lintels and sunshades :

R.C.C. 1:2:4, 20 cm thick for lintel and 8 cm thick for sunshades.

(i) Plan (Scale 1 : 100)

(ii) Section along A-A. (Scale 1 : 100).

15

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- III Draw to a suitable scale the elevation, sectional plan of a half glazed and half panelled window with the given details :

Size of window	–	120 cm × 140 cm	
		two leaves, each contain two panels.	
Frame of window	–	10 cm × 6 cm	
Panel frame	–	8 cm × 4 cm	
Sash bars	–	8 cm × 4 cm	
Glass panel	–	3 mm thick	
Wooden panel	–	25 mm thick.	

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OR

- IV The details of close couple roof is given below. Draw to suitable scale the cross sectional elevation of the close couple roof.

Span	–	400 cm	
Main wall thickness	–	30 cm × 30 cm	
Ridge piece	–	8 cm × 20 cm	
Common rafter	–	5 cm × 12.5 cm	
Wall plate	–	15 cm × 7.5 cm	
Tie joist	–	4 cm × 15 cm.	

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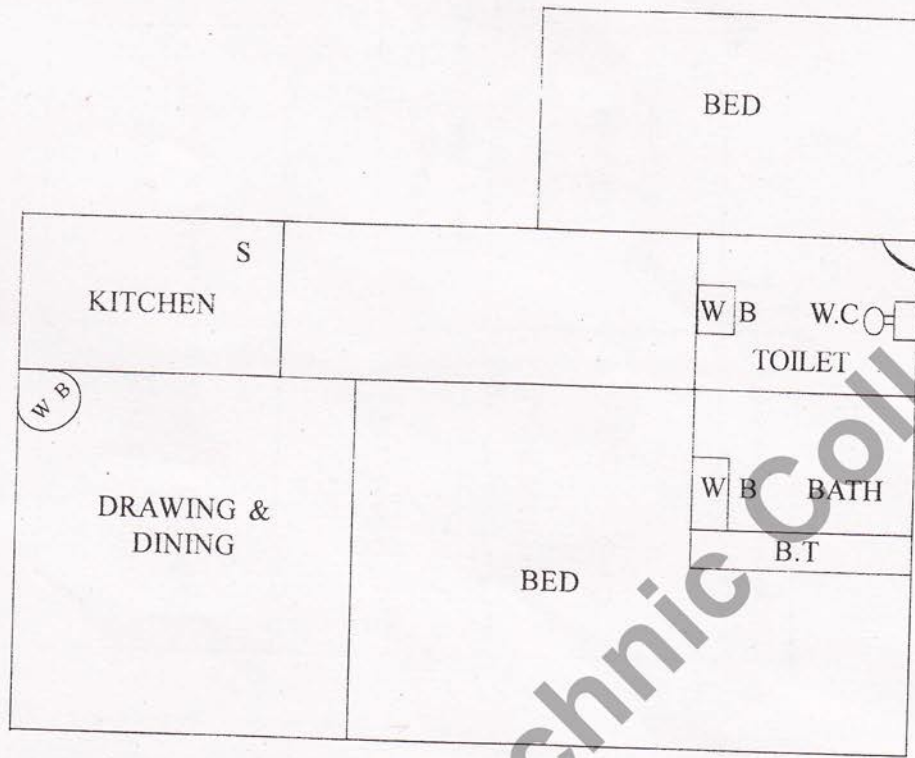
- V Draw the half sectional plan of a R.C.C slab culvert with the following details :

Span	–	150 cm	
Bed level	–	+10.00 m	
Foundation level (Bottom level)	–	+ 9.40 m	
Road level	–	+11.30 m	
Foundation concrete	–	P.C.C 300 mm thick	
Thickness of abutment	–	400 mm	
Thickness of R.C.C. slab	–	200 mm	
Returns	–	Square, 1200 mm from earth face	
Height of parapet	–	80 cm.	

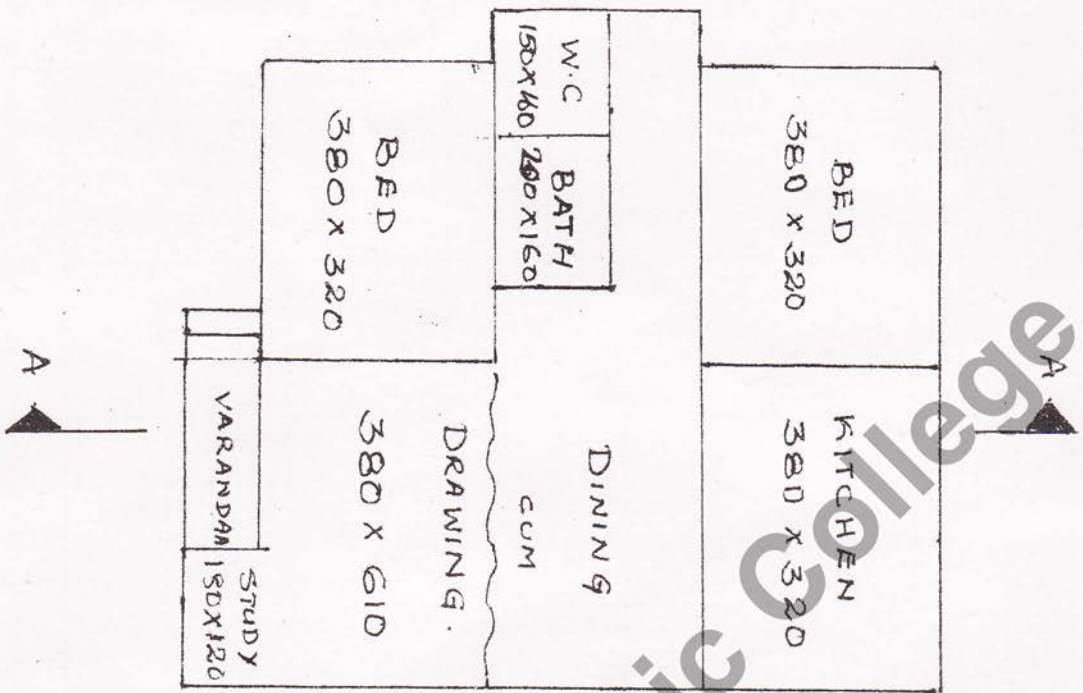
15

OR

VI Draw the sewerage plan of the given line diagram of a residential building :



- WB - Wash basin
 S - Sink
 BT - Bath Tub
 WC - Water closet.



DIMENSIONS ARE IN CM

INDEX

D ₁	-	100 x 210
D ₂	-	80 x 210
W ₁	-	150 x 140
W ₂	-	100 x 140
W ₃	-	150 x 100
V ₁	-	100 x 50

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