

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING TECHNOLOGY

OCTOBER-2011

BUILDING PLANNING AND DRAWING

(Common to CE, QS, EN, WR)

Time : 3 hours

Max. marks: 100

- [Note :
1. Question No. I and II are compulsory
 2. Missing data can be suitably assumed.
 3. Drawing shall be neat and fully dimensioned.
 4. A₂ size drawing sheet to be supplied.

PART-A

(Answer one or two sentences)

1. (a) What is meant by floor area ratio
- (b) Which type roof is provide, if the span is greater than 4m
- (c) Write the minimum area and width of a kitchen as per KMBR.
- (d) What is mezzanine floor?
- (e) What is meant by service plan?
- (f) As per KMBR write down the set back distance for a residential building.
- (g) What is meant by plinth area of a building?
- (h) What is meant by orientation of a building?
- (i) What are the classifications of residential building?
- (J) What are the documents to be submitted for the building permit?

10 x 2

I I (a) Prepare the line plan for residential building according to N B C and KMBR requirements.

Entrance lobby	= 5.00 sqm
Living -cum-dinning	= 25.00 sqm
Bed rooms	= 23.75 sqm (2 nos)
Kitchen	= 13.25 sqm
Car porch	= 12.00 sqm
Toilet	= 6.500 sqm (2 nos)

The size of plot 16 m X 22 m .The width of plot facing the road of 3 m wide.

25

- (b) The line plan shows the lay out of a residential building. Develop the fully dimensioned.

(i) Plan 15
(ii) Section along A-A (scale 1:100) 10

Specifications:

- Bed concrete PCC 1:5:10 - 70 cm x 20 cm
- Foundation R.R. masonry in CM 1:8 - 60 cm x 60 cm
- Basement R.R. masonry in CM 1:8 - 45 cm x 45 cm
- Superstructure one brick wall in CM 1:6 300 cm height.
- Provide doors , windows and ventilators as per requirements.
- RCC roofing 1:2:4 , 10 cm thick.
- RCC Lintels 1:2:4 20 cm thick.
- Sunshade, RCC 1:2:4 60 cm wide and 8 cm thick

II. Draw to a suitable scale the elevation, sectional plan and sectional elevation of a fully paneled double shutter door with the given details.

- Size of door - 90 cm x 210 cm
- No. of panels - three each
- Frame of door - 10 cm x 7 cm
- Panel frame - 7 cm x 3 cm
- Sash bars - 3.5 cm x 3.5 cm

OR

III. The details of a double collar roof is given below:

- Effective span - 600 cm
- Collar - 4 cm x 12.5 cm
- Rafter - 5 cm x 12.5 cm
- Thickness of wall - 30 cm
- Wall plate - 15 cm x 12.5 cm
- Eaves projection - 60 cm
- Ridge - 8 cm x 20 cm

Draw to a suitable scale

- (a) Elevation of the double collar roof
- (b) Connection of ridge piece and common rafter.

IV. A 4.00 m road way RCC slab culvert has the following details.

- Span - 1500 mm
- Bed level of stream - +10.00 m
- Foundation level - + 9.40 m
- Road level - + 11.30 m

Foundation concrete – PCC, 300 mm thick

Thickness of abutment, 400 mm throughout the height.

Slab thickness – 200 mm over a wearing coat 100 mm.

The returns are square projecting 1200 mm from the earth face of the abutment

Draw to a suitable scale

(a) Half sectional elevation

(b) Half sectional plan

15

OR

V. prepare the service plan showing the layout of proposed water supply , drainage and sewerage main lines of a residential building of Fig I I (b)

Fig: II (b)

