

(4Hours)

[Total Marks : 80

Notes: 1. Q.No.1 is compulsory.

2. Attempt any three questions out of remaining five questions.

3. Assume any data suitably, if required.

Q.No.1. It is proposed to construct a bungalow for an Executive Engineer of P.W.D. on a plot measuring 23 m x 20 m in the suburb of Thane District. The building G+1 R.C.C. framed structure, having following requirements.

- (i) Entrance Verandah : minimum 3 mt wide
- (ii) Living Room : 25 sq.mt
- (iii) Engineer's Office : 25 sq.mt.
- (iv) Master Bedroom :20 sq.mt.
- (v) Bed Rooms (2 Nos.) :12 sq.mt each
- (vi) Kitchen cum Dining :25 sq.mt.
- (vii) Study Room :12 sq.mt.
- (ix) Guest Room :15 sqmt
- (x) Store :9 sq.mt.

Provide staircase, passage, sanitary unit , garage, etc. as per bye-laws.

Draw Ground Floor plan.

[20]

Q. No. 2.(a) Draw sectional elevation passing through staircase and sanitary unit , for the building given in Q.No.1

[15]

(b) Draw line plan of first floor for the building given in Q.No.1.

[05]

Q.No.3 (a) Draw front elevation of the building given in Q.No.1.

[08]

(b) Explain Principles of planning with neat sketches.

[08]

(c) Explain objects of Building bye laws.

[04]

- Q.No.4 (a) Draw roof terrace plan of the building given in Q.No.1. [07]
(b) Draw foundation plan of the building given in Q.No.1. [08]
(c) Explain Sunpath Diagram. [05]
- Q.No.5. (a) Explain F.S.I., Plinth Area, Carpet Area, Setback distances [08]
(b) Draw the plan and section of a hall measuring 10 m x 8 m, having lean to roof. [08]
(c) Differentiate between framed structure and load bearing structure. [04]
- Q.No.6. (a) Draw the site plan showing all details of the building given in Q.No.1 [08]
(b) Draw plan and section of a open well staircase for a commercial building, having floor to floor height 3.6 mt. [08]
(c) "Drawing is the Language of Engineer" Explain. [04]