(OLD COURSE)   **QP Code : 3975**

(4 Hours)   (Max. Marks:100)

1. Q.No. 1 is compulsory
2. Attempt any **four questions** from remaining six questions.
3. Assume any data suitably if not given and state it clearly.

1. It is proposed to construct a **RESIDENTIAL BANGALOW** in the suburban area of Thane District for an executive engineer of P.W.D.. The building is (G+1) R.C.C. framed structure, The plot size is 30 mx28 m. Following are the requirements:

    (i)   Entrance Lobby   : min 3 mt wide
    (ii)   Engineer's Office   : 25-30 sq mt
    (iii)   Living Room   : 20-25 sq mt
    (iv)   Study Room   : 12-15 sq mt
    (v)   Master Bedroom   : 20-25 sq mt
    (vi)   Bedroom (2 Nos)   :10-12 sq mt
    (vii)   Kitchen cum Dining Room   : 20-25 sq mt
    (viii) Children room   : 10-12 sq mt.
    (ix)   Stores   : 10-12 sq.mt.

    Provide passages, staircase, sanitary unit, parking area etc. as per byelaws. Place the units are per their requirements on Ground and First Floor.

    Draw Ground floor plan.   (20)

2. (a) Draw first floor line plan of the building given in Q.No.1.   (10)

    (b) Draw the foundation plan for the building given in Q.No.1   (10)

3. Draw the detailed sectional elevation passing through staircase and other important unit of building given in Q.No.1.   (20)

4. (a) Differentiate among Load Bearing, Framed and Composite structure with neat sketches and examples.   (10)
    (b) Draw the plan and section of pitched roof on hall measuring 8m x 7m.   (10)

5. (a) What are various objects of building bye-laws. Explain Carpet area, Floor area.   (10)
    (b) Draw roof terrace plan of the building given in Q.No.1   (10)

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6. (a) (b) Draw the front elevation of the building given in Q.No.1.   (10)

    (b) Draw the site plan showing proposed built-up area, internal road, parking area, open
    space etc of the building given in Q.No.1.   (10)

7. (a) Draw the plan and section of open well staircase for an educational building (G+1) having
    floor to floor height 3.6 mts. Also show design calculations.   (10)

    (b) Explain Working drawing and submission drawing.

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