(4 Hours) [Total Marks: 80]

N. B. : (1) Question No. **1** is **compulsory**.
(2) Answer any **three** questions from remaining **five** questions.
(3) Assume suitable data if required and state it clearly.

1. It is proposed to construct a R.C.C framed structure Residential Bungalow as
(G+1) with the following requirements.
   a) Drawing Hall   -25 m^2
   b) Master Bedroom(with A.T)   - 18 m^2
   c) Bed Room (Two Nos.)   - each 12 m^2
   d) Kitchen   - 8 m^2
   e) Dinning Area   - 12 m^2
   f) Guest Room   - 15 m^2

   Provide verandah, staircase, passage and sanitary units as per byelaws. Assume
   floor to floor height -**3.3 m**.
   i) Draw the ground floor plan.   **15**
   ii) Draw the line plan of first floor.   **5**

2. Draw the sectional elevation for the bungalow you have planned in Q.no1.   **20**

3. (a) Explain principles of planning in hospital building.   **7**
   (b) Draw **line plan** of school Building using following requirements, on **Ground Floor.** **13**
       o
       a) Class room (6- numbers)   - each 70 m^2
       b) Laboratory (3- Nos.)   - each 60 m^2
       c) Computer Room   -75 m^2
       d) Principal Room   - 45 m^2
       e) Staff Room   - 60 m^2
       f) Office   - 75 m^2
       g) Library cum Reading Room   - 75 m^2
       h) Gymkhana   - 100 m^2

   Provide adequate passage, staircase, sanitary unites as per byelaws.

4. Draw one point perspective for the Bungalow you have planned in Q.no.1   **20**

5. (a) Explain Principles of Planning for Residential Buildings.   **10**
   (b) Calculate number of risers and trades for commercial building having staircase **10**
       room 3030 mm x 2270 mm internal size (excluding wall thickness). Floor to floor
       height is 3.2 m, also draw plan of staircase. Consider wall thickness is 230 mm.

6. Write short note on,   **20**
   a) Green Building
   b) Zoning
   c) Types of foundations for Residential & Public Buildings
   d) Use of computers in planning and designing of Buildings

******