Total No. of Questions—8]　　　　　[Total No. of Printed Pages—3

Seat
No.

**[5152]-107**

S.E. (Civil) (Second Semester) EXAMINATION, 2017
ARCHITECTURAL PLANNING AND DESIGN OF BUILDINGS
(2012 PATTERN)

**Time : Two Hours　　　　　　　　　Maximum Marks : 50**

**N.B. :—** (*i*) Solve Q. No. **1** or Q. No. **2** and Q. No. **3** or Q. No. **4** on answer sheet.

(*ii*) Solve Q. No. **5** or Q. No. **6** and Q. No. **7** or Q. No. **8** on drawing sheet only.

(*iii*) Assume suitable data if necessary.

1. (*a*) Write a note on : [6]

(*i*) Profit and non profit zones

(*ii*) Density zones.

(*b*) Enlist different principles of architectural planning and elaborate any two with sketches. [7]

*Or*

2. (*a*) Write short notes on TDR. [6]

(*b*) Explain the importance of earthquake resistant structures in today's context. [7]

3. (*a*) The internal dimensions of a tile manufacturing unit are 40×20×5m. The number of air changes available are 5. The indoor temperature is 35ºC and outdoor is 30ºC. Find the area of openings if the distance between inlet and outlet openings is 2.5m. [6]

(*b*) Write a short note on solar energy and its applicability and importance. [6]

P.T.O.

*Or*

**4.** (*a*) Explain with sketch, "Layout of water supply."    [6]

   (*b*) Explain with sketch :    [6]

   (*i*) Centre of vision

   (*ii*) VPL.

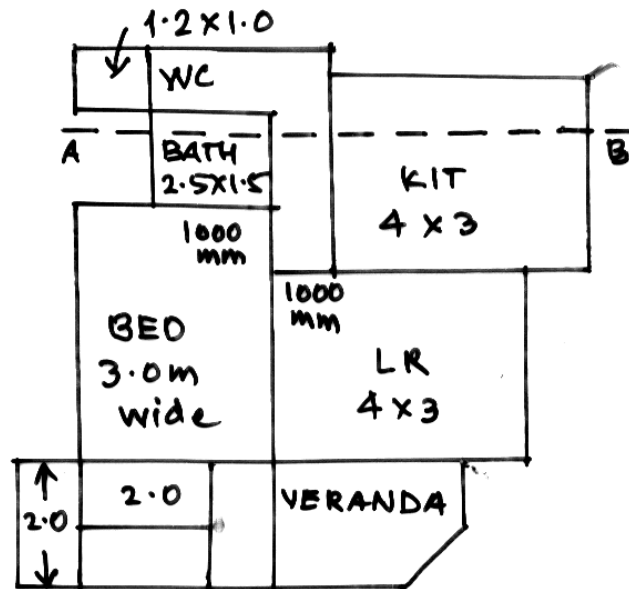**5.** Draw a detailed floor plan to a scale of 1 : 50 or otherwise using following data :    [13]

   (*i*) LR - 15m² (1 in No.)

   (*ii*) Kitchen + Dining – 9m²

   (*iii*) M.B.R. – 15m² + Toilet 3m²

   (*iv*) B.R. – 15m²

   (*v*) WC – 1.2 × 1m²

   (*vi*) Bath – 1.2 × 2.1m²

   Ext. Walls-230 mm int walls-115mm.

   Staircase—Assume height = 3m, R = 0.15, T = 0.25m.

*Or*

**6.** Draw a sectional elevation by referring Fig. 1 :    [13]



FL TO FL HT = 2.88m

Riser HT = 0.16 T = 0.25m

Plinth HT = 0.48 *m*

Fig. 1.

**7.** Design a single storey hostel building for 50 Students : [12]

   (*i*) 20 Rooms, Two seated with 7.5m²/Student and 10 single seated rooms with 9m² area.

   (*ii*) Recreation room – 35m²

   (*iii*) Gymnasium – 15m²

   (*iv*) Office area – 20m², assume additional suitable data. [Line plan is expected with N-line and schedule of openings.]

*Or*

**8.** Draw a line plan with N-line & Schedule of openings using following data : [12]

   (1) Post Office – entrance & moving area – 30m²

   (2) Countres – 4 No, 0.7m wide

   (3) Post Master's room – 15m²

   (4) Post separation room – 30m².

   (5) Safe custody – 10m²

   (6) Cash transaction – 15m²

   (7) Assume additional suitable data.