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[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 35°C and outdoor is 30°C. 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]

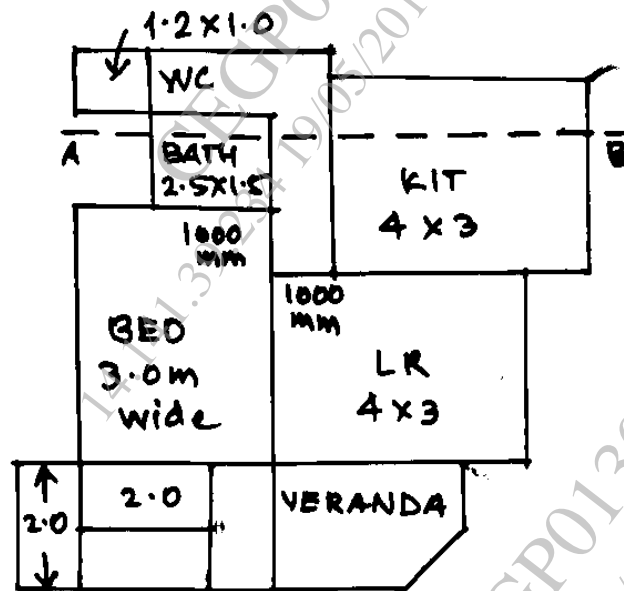
P.T.O.

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 - 15m^2 (1 in No.)
 (ii) Kitchen + Dining - 9m^2
 (iii) M.B.R. - 15m^2 + Toilet 3m^2
 (iv) B.R. - 15m^2
 (v) WC - $1.2 \times 1\text{m}^2$
 (vi) Bath - $1.2 \times 2.1\text{m}^2$
 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 $7.5\text{m}^2/\text{Student}$ and 10 single seated rooms with 9m^2 area.
 - (ii) Recreation room – 35m^2
 - (iii) Gymnasium – 15m^2
 - (iv) Office area – 20m^2 , 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 – 30m^2
 - (2) Counters – 4 No, 0.7m wide
 - (3) Post Master's room – 15m^2
 - (4) Post separation room – 30m^2 .
 - (5) Safe custody – 10m^2
 - (6) Cash transaction – 15m^2
 - (7) Assume additional suitable data.