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**[4957]-1007**

**S.E. (CIVIL) (Second Semester) EXAMINATION, 2016**  
**ARCHITECTURAL PLANNING AND DESIGN OF BUILDINGS**  
**(2012 PATTERN)**

**Time : 2 Hours****Maximum Marks : 50**

- N.B. :—** (i) Solve Q.No. 1 or Q.No. 2, Q.No. 3 or Q.No. 4 in the answer-book.
- (ii) Solve Q.No. 5 or Q.No. 6 Q.No. 7. or Q.No. 8 on the drawing sheet only.
- (iii) Assume suitable data if necessary.
- (iv) Figures to the right indicate full marks.

1. (a) Elaborate the need of DP and explain what is the relation of DP with quality of life. 7
- (b) Write short notes on :
- (i) Evacuation time
- (ii) Travel distance. [6]

*Or*

2. (a) Write a note on 7/12 abstract, its importance and meaning of every term on it. [6]
- (b) Write short notes on :
- (i) Salient features of a “Green building”. [3]
- (ii) Earthquake loads and suggested techniques to resist the same. [4]

P.T.O.

3. (a) Write short notes on : [6]  
 (i) Sound foci and Dead spots  
 (ii) Need of Artificial lighting

(b) Elaborate two-pipe system. [6]

Or

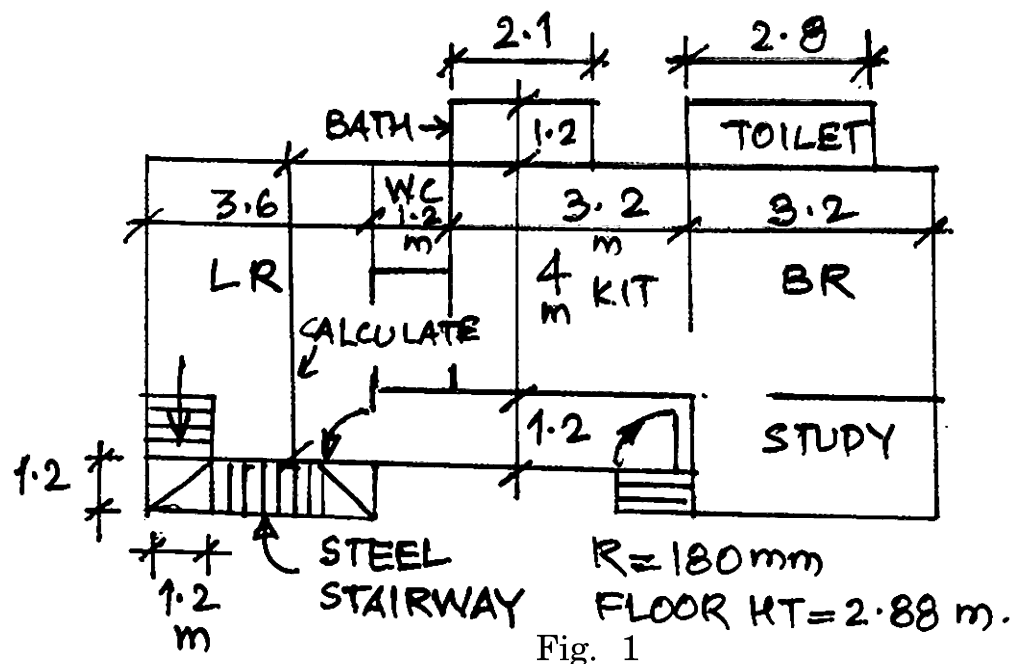
4. (a) Write a note on Mechanical ventilation system (sketch is expected.) [6]

(b) What is F.A.R. ? Which areas are excluded from total area while calculating F.A.R. ? [6]

5. Draw to a scale of 1 : 50 or otherwise, detailed plan with the following details. [13]

- (i) Structure type — R.C.C., (Ground Floor)  
 (ii) Wall thickness — 230 mm external, 100 mm internal  
 (iii) Column dimensions — 230 mm × 380 mm

Plan—10 marks, Schedule of openings—3 marks. [Refer figure 1]



*Or*

6. Draw to a scale of 1 : 50 or otherwise a detailed plan of a bungalow with the following details : [13]

- (i) Living room – 18 m<sup>2</sup>
- (ii) Kitchen – 12 m<sup>2</sup>
- (iii) Master BR – 18m<sup>2</sup> (inclusive of internal toilet)
- (iv) Bedroom – 12 m<sup>2</sup>
- (v) W.C. – 1 × 1.2 m<sup>2</sup>
- (vi) Bath – 1.2 × 2.1 m<sup>2</sup>
- (vii) Passage – 1.2 m wide
- (viii) Floor height – 3.2 m
- (ix) Rise – 0.16 m, Tread – 0.275 m.

7. Using the following data; design a primary Health centre. (Assumed data; if any; is to be clearly mentioned).

- (i) Entrance and (reception + waiting) — 3m × 5m
- (ii) Doctors room (2No.) – 3 × 3.6 m<sup>2</sup>
- (iii) Examination/Dressing — 3 × 4 m<sup>2</sup>
- (iv) Operative area for Minor Surgery — 4 × 4.5 m<sup>2</sup>
- (v) Ward — (2 in no., for 8 patients) — 8 m<sup>2</sup>/patient
- (vi) Drug store— 3 × 4 m<sup>2</sup>

- (vii) Admin/office—  $3 \times 4 \text{ m}^2$
- (viii) Resident doctor quarter—  $90 \text{ m}^2/\text{Family}$
- (ix) Servents quarter—  $500 \text{ m}^2/\text{family}$
- (x) Staircase, corridors sanitation block—suitable provisions. [12]

*Or*

8. Design a hostel (two-seated) to accommodate **50** students, with the following details :

- (i) Room size —  $7.5 \text{ m}^2/\text{person}$
- (ii) Kitchen— $9.5 \text{ m}^2$  —minimum
- (iii) Dining— $3-4 \text{ m}^2/\text{person}$ .
- (iv) Recreation hall— $3 \text{ m}^2/\text{person}$
- (v) Store—  $6\text{m}^2$  —minimum
- (vi) Pantry—  $6\text{m}^2$  —minimum
- (vii) Passage— 1.8 m wide
- (viii) Staircase and sanitary block—Suitable provisions. [12]