Total No. of Questions—**8**] [Total No. of Printed Pages—**4+1**

Seat No.	

[4757]-1007

S.E. (Civil) (Second Semester) EXAMINATION, 2015

ARCHITECTURAL PLANNING AND DESIGN OF BUILDINGS

(2012 PATTERN)

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

N.B. **:—** (*i*) Assume suitable data, if required.

(*ii*) Figures to the right indicate full marks.

(*iii*) Solve Q. No. **1** *or* Q. No. **2,** Q. No. **3** *or* Q. No. **4** in answer-book.

(*iv*) Solve Q. No. **5** *or* Q. No. **6,** Q. No. **7** *or* Q. No. **8** on Drawing Sheet only.

1. (*a*) Elaborate the term land use zoning and mention the requirements of each of them. (Minimum **4** zones) [7]

(*b*) Explain the following principles of architectural planning with suitable sketches : [6]

(*i*) Privacy

(*ii*) Roominess.

P.T.O.

Or

2. (*a*) Enlist documents to be submitted for Seeking Commencement Certificate and Occupancy Certificate. [6]

(*b*) Elaborate need for earthquake resistant structures in relation with–loss of human life; property and infrastructure. [7]

3. (*a*) What are Acoustical defects ? Explain any *two* in detail. [6]

(*b*) Differentiate between building line and control line by drawing a suitable sketch. [6]

Or

4. (*a*) The internal dimensions of a factory building are 30×20×10 (m^3). The number of air changes required per hour are 6, the indoor temperature is 36°C and outdoor temperature is 30°C. Find the area of openings required, if the distance between the inlet and outlet openings is 6 m. [6]

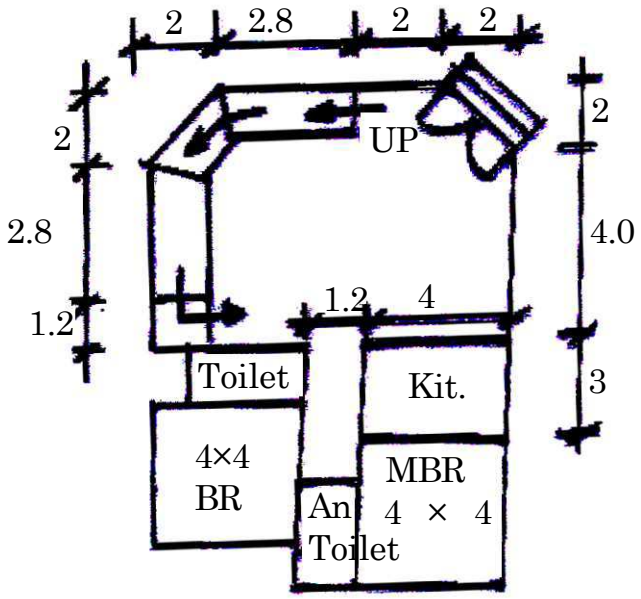
(*b*) Explain with sketch the following terms : [6]

(*i*) SP

(*ii*) CV

(*iii*) PP.

5. Draw a detailed floor plan to a scale of 1:50 of a residential building for the given line plan below. Use the following data : RCC framed structure, wall thk. 150 mm, Single storey building, Plinth height 450 mm. All dimensions in the sketch are in m. Indicate suitable locations and sizes of doors, windows in schedule of openings. Tread for the step is 280 mm. [13]



Or

6. Draw a detailed floor plan to a scale of 1:50 with the following data : [13]

(*i*) Living room 1 no. approx. area 15 m^2

(*ii*) Kitchen-cum-Dining 1 no. approx. area 15 m^2

(*iii*) Bed rooms 2 no. approx. area 12 m^2 each

(*iv*) Floor to floor height 3.3 m

(*v*) Load bearing structure

(*vi*) Foundation and plinth in UCR masonry

(*vii*) Varandah, passage, staircase, W.C. and Bath/attached toilet etc. of suitable sizes should be provided. Indicate the North.

7. Design a single storey hostel building and draw only line plan with the following data : [12]

(*i*) Number of students 50

(*ii*) Twenty rooms are two seated with 7.5 sq. m area per student and ten single seated with 9.5 sq. m area.

(*iii*) Recreation room approx. area 35 m^2

(*iv*) Gymnasium approx. area 15 m^2

(*v*) Office space approx. area 12 m^2

(*vi*) Store room approx. area 10 m^2

(*vii*) Varandah, passage, staircase, W.C. and Bath etc. of suitable size should be provided.

Show North direction and mention scale.

Or

8. Draw a line plan of a Post-office using the following data :[12]

Entrance and moving space : 30 m^2 with seating arrangement

Public dealing counters : 6 in no. with 0.5 m width

Post-master's room : 15 m^2

Working area for other staff : 30 m^2

Post separation room : 30 m^2

Safe custody area for cash : 10 m^2

Cash transaction room : 12 m^2

Speed post delivery section : 12 m^2

Water room and Toilet (separate for male and female) : 7.5 m^2.