Total No. of Questions—9]

[Total No. of Printed Pages—4+2

Seat No.

[4757]-107

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

BUILDING PLANNING

(2008 PATTERN)

Time : Four Hours

Maximum Marks : 100

N.B. :— (*i*) *All* questions are complsory.

(*ii*) Answers to the two sections should be written in separate answer-books.

(*iii*) Draw neat sketches wherever necessary.

(*iv*) Section two should be drawn on drawing sheet only.

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

(*vi*) There will be no internal option for questions in Section II.

(*vii*) Assume suitable data, if necessary.

SECTION I

1. (*a*) State different objectives of DP and parameters of quality of urban life. [8]

(*b*) Explain the importance of orientation of building with respect to cardinal direction. [4]

(*c*) Enlist the documents to be submitted along with the building plans. [4]

P.T.O.

2. (*a*)   Explain the utility of 6-D form, 7/12 form.   [8]

(*b*)   Explain the role of Plan Sanctioning Authority for township. [4]

(*c*)   What are the different methods opted for Rain water harvesting ? Explain any *one* in detail.   [4]

3. (*a*)   Explain with sketches wind effects and stack effects.   [9]

(*b*)   Explain the following terms with sketches :   [9]

(*i*)   Building line

(*ii*)   Control line

(*iii*)   Marginal distance.

Or

4. (*a*)   State the byelaws regarding road width and height of the building.   [6]

(*b*)   What do you understand by artificial elimination and quality of air ?   [6]

(*c*)   Write short notes on :   [6]

(*i*)   Natural Ventilation

(*ii*)   Artificial Lighting.

5. (*a*) Explain in detail any *two* constructional measures for noise control. [6]

(*b*) What factors influence fire development in a building ? [4]

(*c*) Write short notes on septic tank with soak pit. [6]

Or

6. (*a*) Explain : [6]

(*i*) Sabine's formula

(*ii*) Sound foci and Dead spots.

(*b*) Explain one-pipe and two-pipe plumbing system. [6]

(*c*) What factors affect designing and planning of electrical services ? [4]

SECTION II

7. A line plan for a residential building is shown in Fig. 1. Use the following data :

(*a*) All external walls are of 230 thick

(*b*) All partition walls are of 115 thick

(*c*) RCC frame structure

(*d*) Beam sizes = 230 × 450

(*e*) Column sizes = 230 × 450

(*f*) Floor to floor height = 3150

(*g*)   Plinth height = 450

(*h*)   Depth of foundation = 1500

(*i*)   Trade = 250

(*j*)   All dimensions are in mm.

     (*i*)   Draw to scale 1 : 50 detailed plan   [8]

     (*ii*)   Draw to scale 1 : 50 detailed section XX   [8]

     (*iii*)   Write schedule of openings   [2]

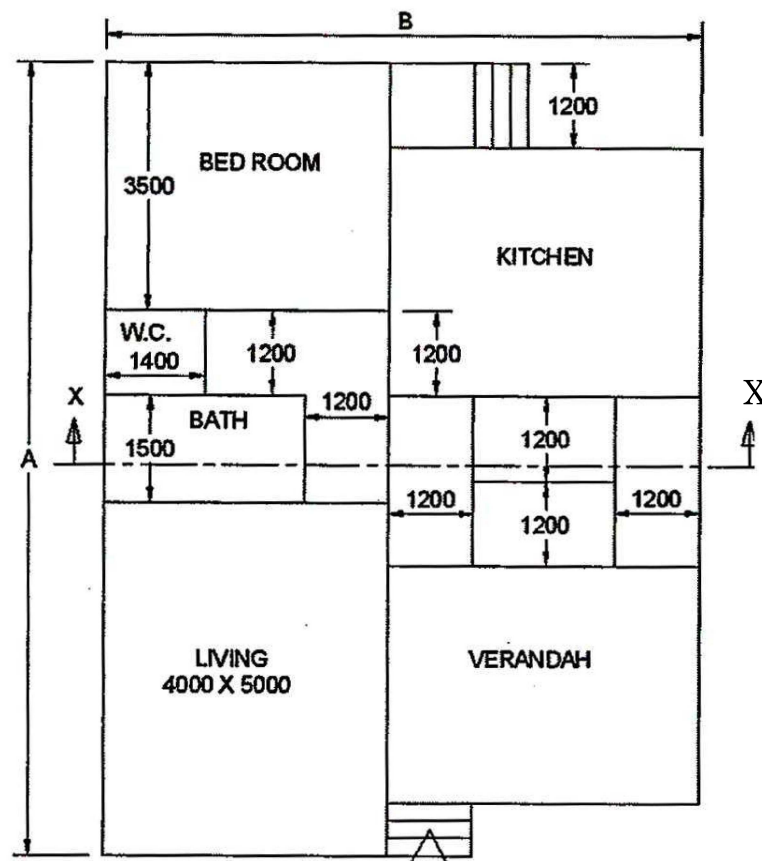   (*iv*)   Calculate A and B dimensions.   [2]

Fig. 1 : Plan

8. It is proposed to construct a library building in an engineering college with the following units : [15]

   (*i*)   Entrance/Entrance Lobby

   (*ii*)   Issue counters + other related activities

   (*iii*) Reference section

   (*iv*)   Journal/magazine/newspaper section

   (*v*)   Reading Hall—capacity 50-60 students

   (*vi*)   Electronics learning room with computer (10 Nos.) and facilities like T.V., Internet, etc.

   (*vii*) Seminar room/Discussion room—capacity 25 students

   (*viii*) Space/Shelves for stacking books—80 sq. m.

   (*ix*)   Cabins for librarian/Asst. librarian/clerk

   (*x*)   Toilets for gents, ladies, wash basin, drinking water fountain

   (*xi*)   Assume any other data required.

   Draw a line plan showing the arrangements of all units and indicate location of doors and windows.

9. Draw to a scale of 1 : 50 or suitable a two point perspective of the building shown in Fig. 2 : [15]

   (*i*)   Eye level at human height

(ii)   D = 1000 × 2100, W = 600 × 1000

(iii) All dimensions are in mm

(iv)   Station point at 12000 mm away from picture plane vertically below the corner of the building touching the picture plane.
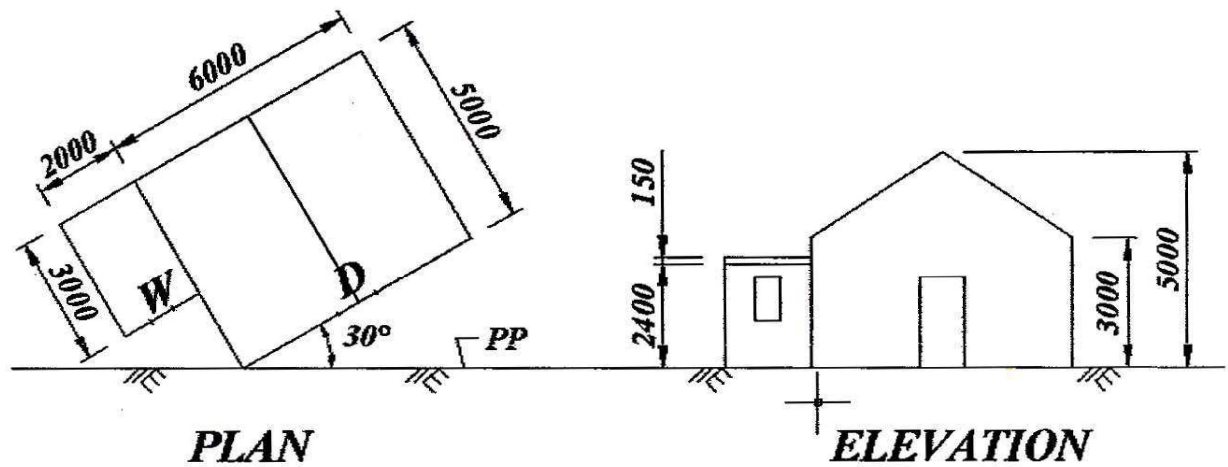
(v)   Retain all construction lines.

Fig. 2