16172

4 Hours / 100 Marks   Seat No.

Instructions – (1) All Questions are *Compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) **Answer any <u>THREE</u> of the following:** 12

   (i) Draw conventional symbol for,

      1) Sink

      2) Wash basin

      3) Bed

      4) Urinal

   (ii) Explain with sketch principle of privacy.

   (iii) Write any eight construction notes for load bearing structure.

   (iv) State principles of perspective view.

   b) Draw a line plan to scale 1:50 for a library building at district level. 8

2. Figure No. 1 shows a line plan of a residential building. Draw to a scale 1:50 the following views:

    (i) Developed plan   **12**

    (ii) Front elevation   **8**

    (iii) Section AB   **8**

    Use the following data:

    1)   Depth of foundation 1.30 m below GL.

    2)   Plinth height above GL 800 mm

    3)   Ceiling height 2850 mm

    4)   Wall thickness 300 mm for external and 230 mm for internal walls.

    5)   Slab thickness 120 mm

    6)   Chhajja 600 mm projection

    7)   UCR masonry 500 and 700 mm wide in foundation and depth 550 mm each.
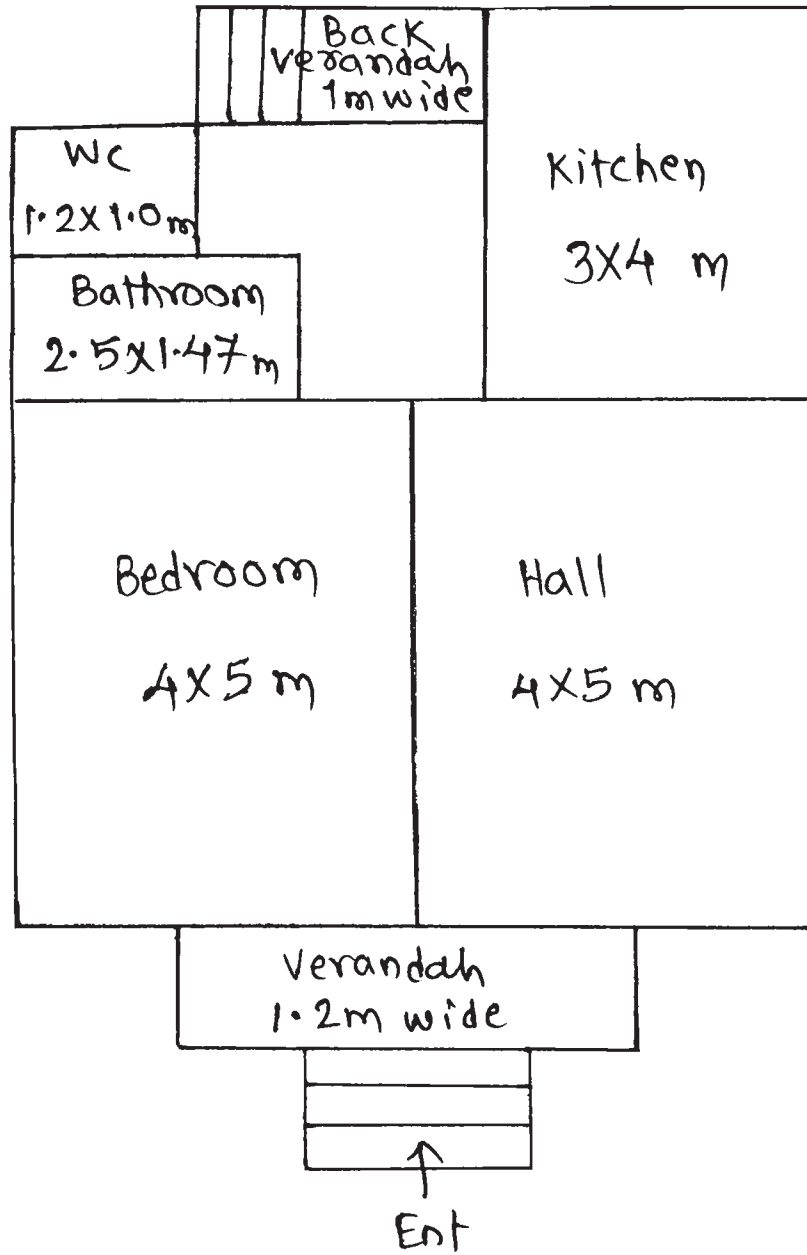
    8)   Assume suitable data if required.

Back verandah 1m wide

WC 1·2X1·0 m

Bathroom 2·5X1·47 m

Kitchen 3X4 m

Bedroom 4X5 m

Hall 4X5 m

Verandah 1·2m wide

Ent

Fig. No. 1

Marks

3.   **Answer any THREE of the following:**   **24**

a)   Draw to a suitable scale terrace plan of the building mentioned in Question No. 2.

b)   Prepare area statement for building mentioned in question no. 2 Take plot size 18 m × 25 m. Calculate FSI consumed.

c)   State various units required for bank building at district place.

d)   Define perspective view, picture plane, station point, true height and give any four differences between one point and two perspective view.

4.   **Answer any TWO of the following :**   **16**

a)   Explain with examples principle of sanitation with cleaniness, ventilation and light.

b)   Draw a detailed plan and section for a RCC footing from following data for stepped footing.

(i)   Size of column 230 × 300 mm

(ii)   First step - 1000 × 1200 mm

(iii) Second step - 800 × 1000 mm

(iv) Depth of each footing - 250 mm

(v)   Depth of foundation 1200 mm

(vi) Assume suitable data and mention it clearly.

c)   Prepare schedule of opening for question No. 2 building.

5. **Attempt the following:** 12

Figure No. 2 shows a pedestal and draw perspective drawing of it. Assume eye level at 1.5 m above ground level. The station point is 3 m from picture plane.
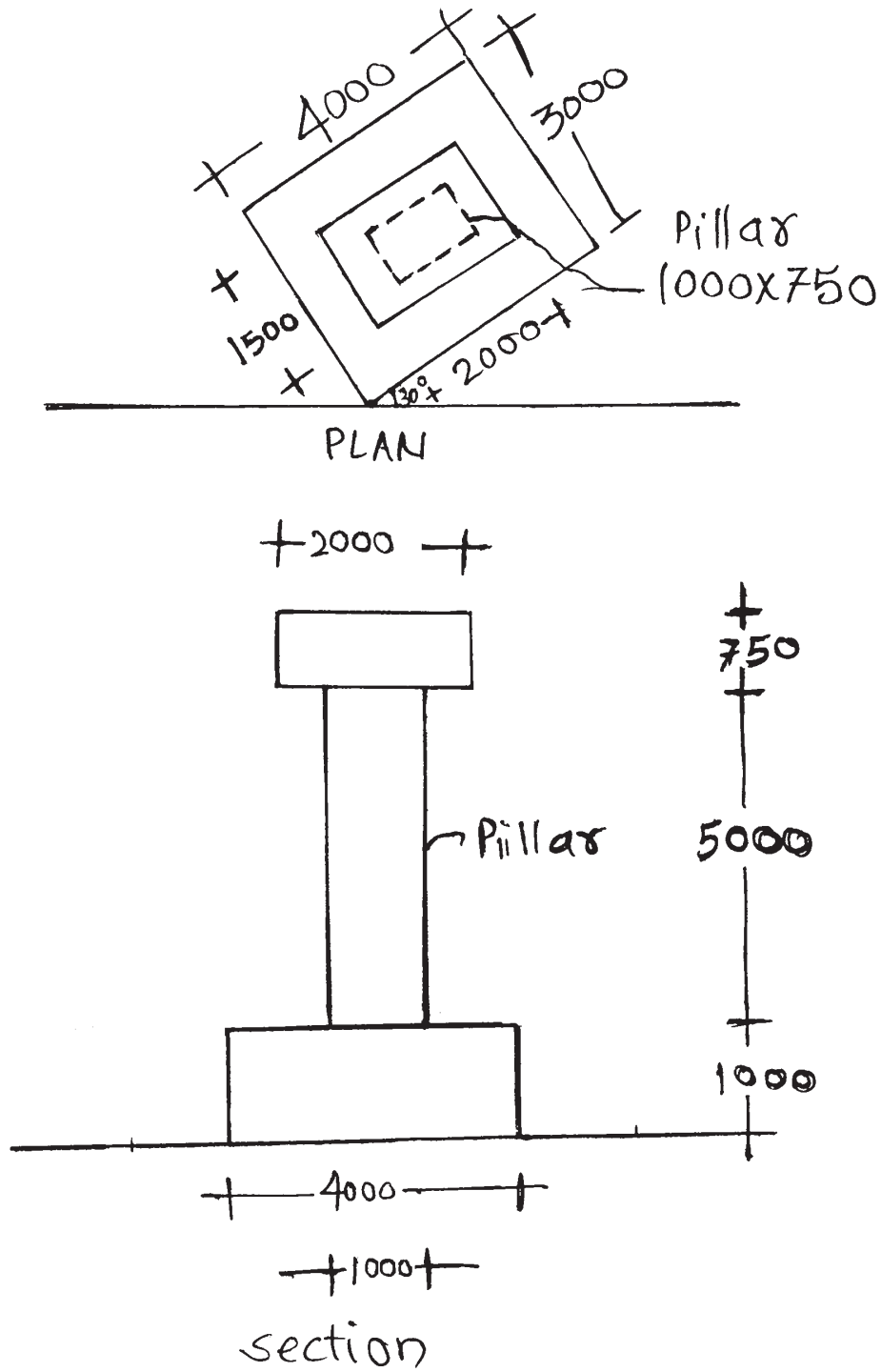

PLAN

section

Fig. No. 2