

# 17309

**13141**

**4 Hours / 100 Marks**

Seat No.

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- 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) Attempt any **THREE** of the following: **12**
- i) Draw symbols for:
    - 1) Concrete
    - 2) Timber
    - 3) Wash basin
    - 4) Brick masonry.
  - ii) Draw any four types of lines used in civil engineering drawing.
  - iii) Explain the importance of ‘Aspect’ and ‘Prospect’ in building planning.

P.T.O.

- iv) State the minimum dimensions provided for:
- 1) Rise and tread in residential building.
  - 2) Sill height
  - 3) Plinth level
  - 4) Kitchen platform height.
- b) Draw to a suitable scale a line plan of Primary Health Centre (PHC) showing different units. Show positions of door and windows. **08**
2. Figure No. 1 shows a line plan of residential building. Draw to the scale of 1 : 50 the following views. Show all dimensions and label the parts.
- i) Developed plan **12**
  - ii) Elevation **06**
  - iii) Section along AB **10**
- Use the following construction note:
- a) Depth of foundation 1000mm below GL.
  - b) Plinth height 600mm.
  - c) Height of bottom of slab from floor 3100mm.
  - d) Thickness of slab 150mm.
  - e) Assume chajja projections 750mm.
  - f) Super structure BB masonry with walls 300mm thick and internal walls bath and WC 100mm thick.
- Assume suitable data if required.

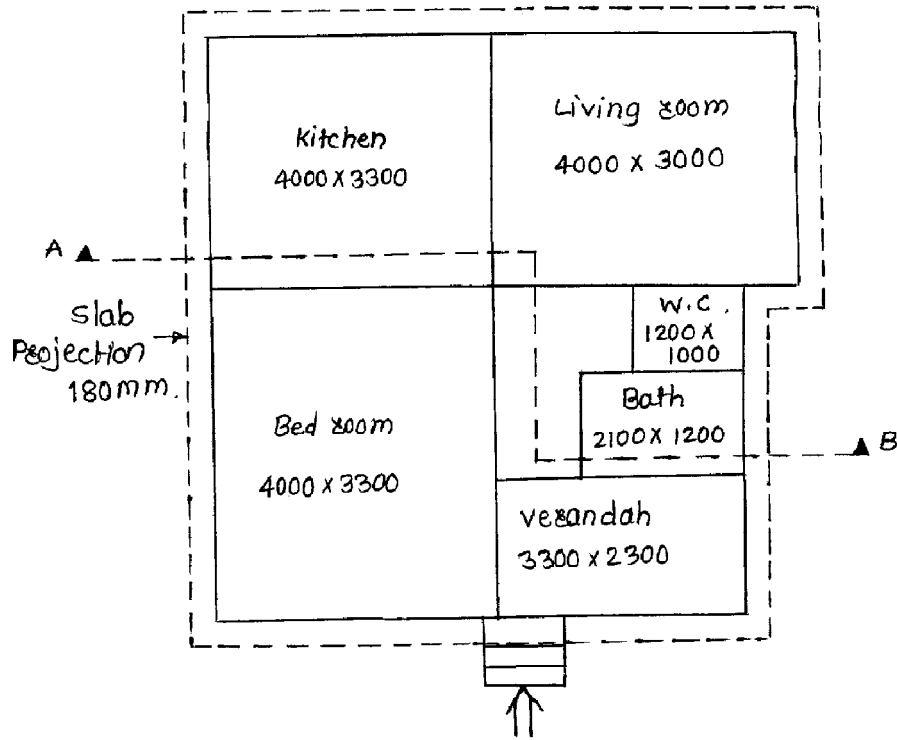


Fig. not to scale.

**Fig. No. 1**

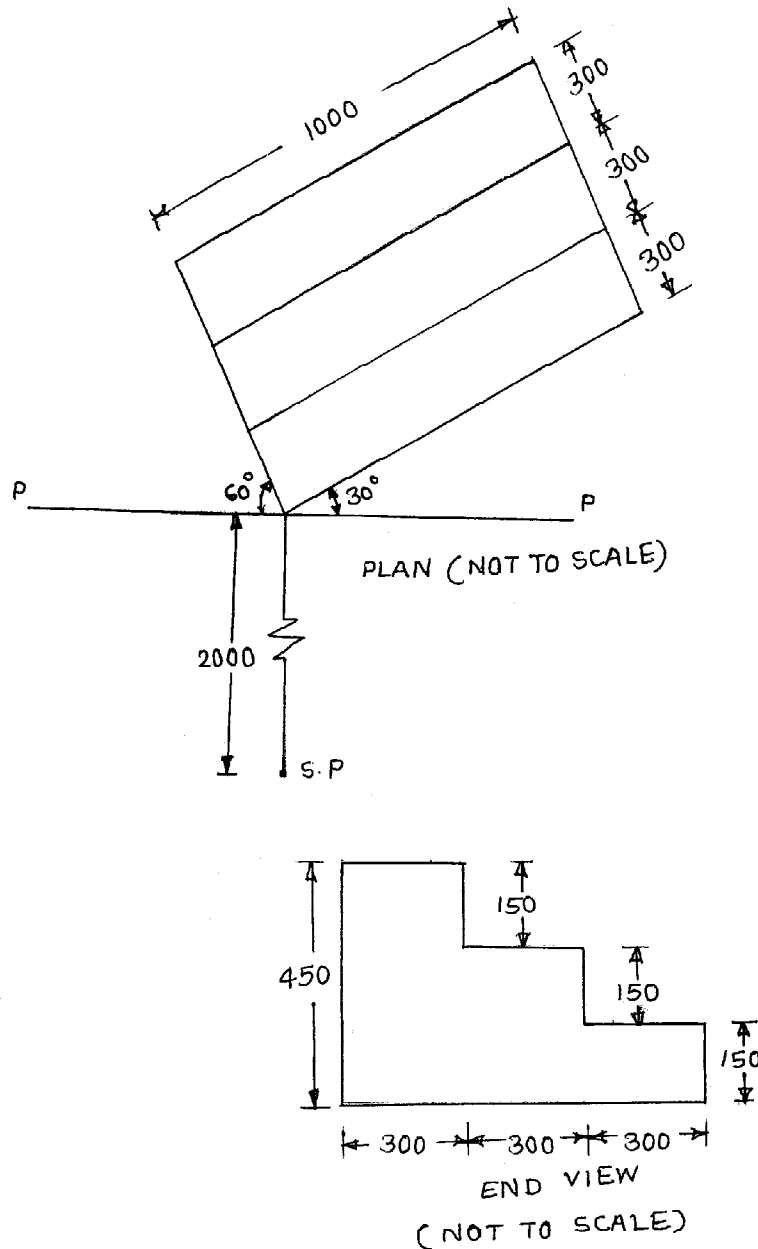
3. Attempt any **THREE** of the following: 24
- Prepare schedule of opening and area statement for Q. No. 2.
  - Draw to the suitable scale a site plan for a building mentioned in Q. No. 2.
  - Suggest various service units and sizes for a canteen for 200 people.
  - State the importance of submission drawing and working drawing in civil engineering works.
    - Define One-point perspective and Two-point perspective.

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

- a) Explain the terms orientation and furniture requirements.
- b) Define following:
  - i) far
  - ii) carpet area
  - iii) plinth area
  - iv) built up area.
- c) Draw detailed plan and section of R.C.C. column and column footing:
  - i) size of footing  $1200 \times 1200$
  - ii) size of column  $300 \times 300$

5. Draw the two point perspective view of a small object shown in Fig. No. 2. Retain all construction lines. Take eye level at 1.50m above GL. All dimensions are in mm. Assume any data if required.

12

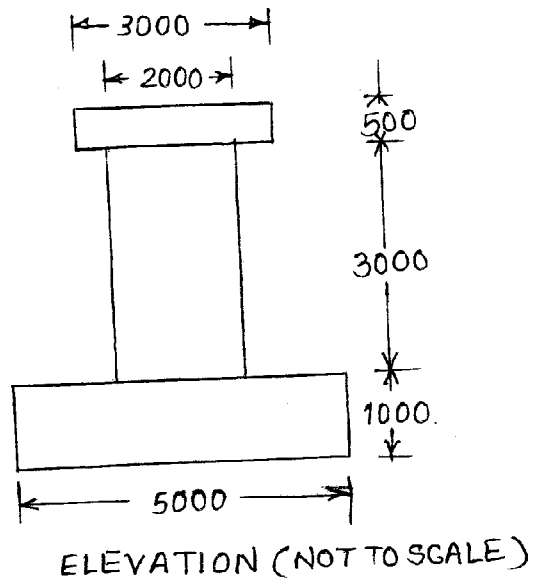
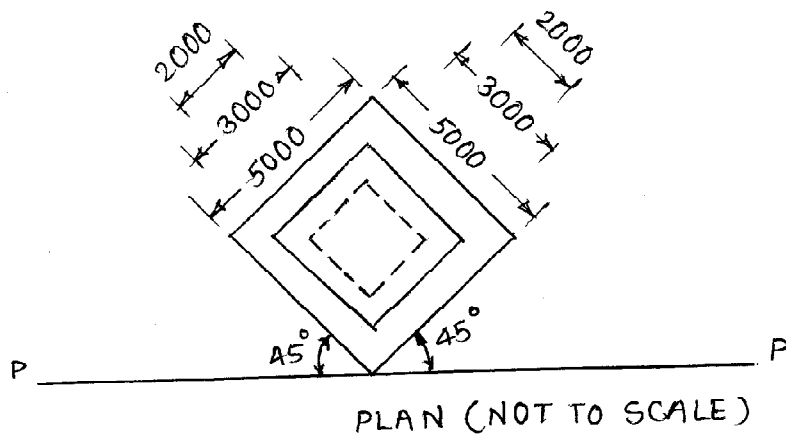


(All dimensions are in mm)

**Fig. No. 2**

OR

Draw to a suitable scale a two point perspective drawing. Assume eye level at 2.1m above GL. The observer stands at a distance 4.7m along central visual ray. Retain all construction lines. Assume additional data if required. Shown in Fig. No. 3.



(All dimensions are in mm)

**Fig. No. 3**

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