

17309

11920

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 graphical symbols for:
 - 1) Indian W.C.
 - 2) Exhaust Fan
 - 3) Single leaf double swing door
 - 4) Ground Level.

P.T.O.

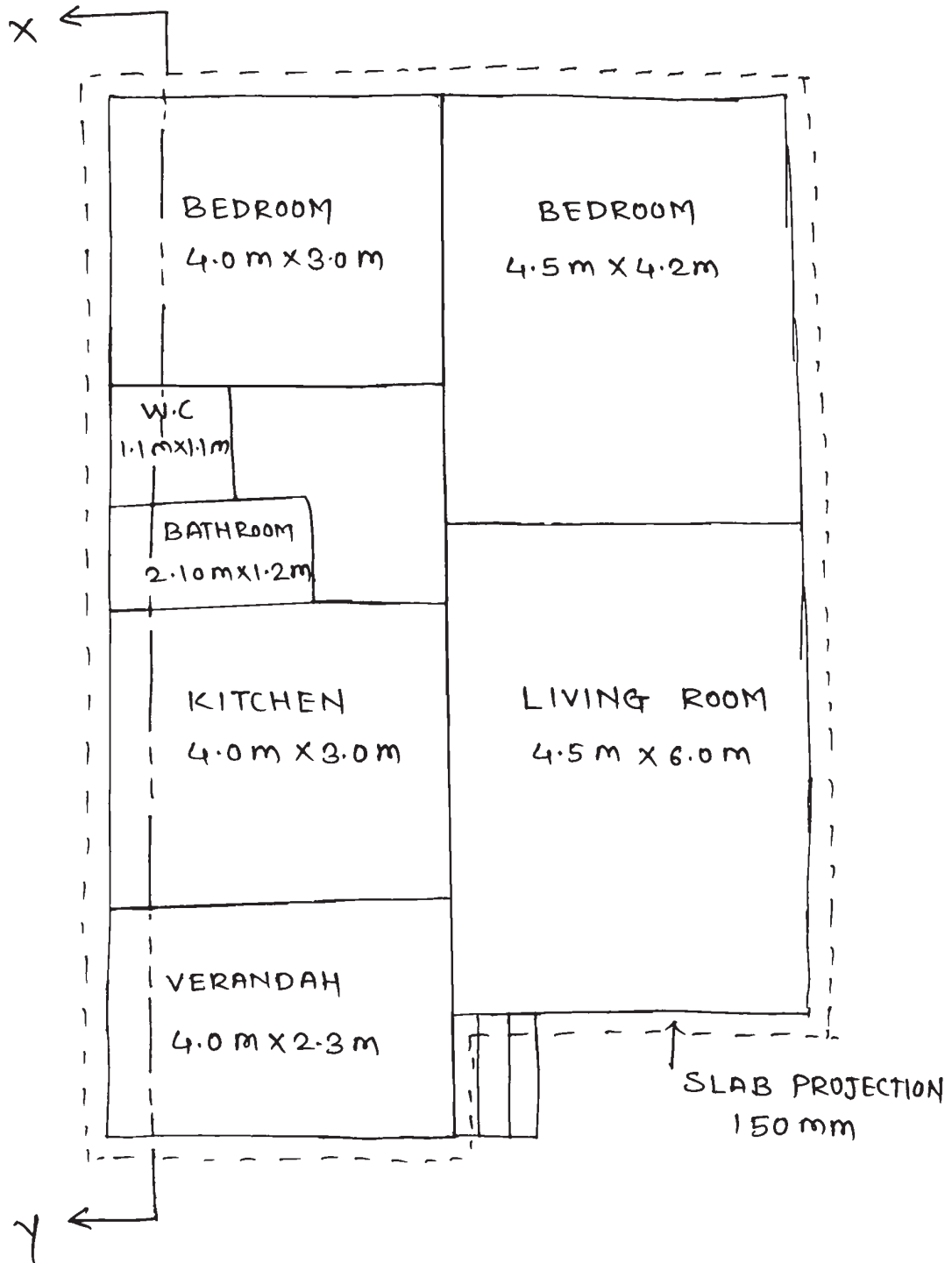
- (ii) Give minimum sizes required for the following units of a residence.
- 1) Kitchen cum dining.
 - 2) Rise of step.
 - 3) Separate W.C.
 - 4) Floor height.
- (iii) Write the full forms of following abbreviations used in civil engineering drawing.
- 1) CCTW
 - 2) FAR
 - 3) BBM
 - 4) UCR
 - 5) RCC
 - 6) N.T.
 - 7) DPC
 - 8) M.H.
- (iv) Define -
- 1) Floor Space Index (FSI)
 - 2) Carpet area
 - 3) Plinth area
 - 4) Built-up area

- b) Draw to suitable scale a line plan of a Post Office.

2. Attempt the following:

28

Figure no. 1 shows a line plan of a residential building. Draw to suitable scale the following views, show all dimensions and label the parts.

Fig. No. 1

P.T.O.

- | | |
|--------------------|-----------|
| a) Developed plan | 12 |
| b) Front Elevation | 6 |
| c) Section X-Y | 10 |

Use the following construction notes:

- (i) Type of structure - Load bearing
 - (ii) Depth of foundation 0.9 m below ground level.
 - (iii) Plinth height 0.75 m
 - (iv) Ceiling height 3.0 m
 - (v) PCC (1:4:8), 0.2 m thick
 - (vi) Wall thickness 0.3 and for W.C. and Bath 0.2 m
 - (vii) Chajja 0.45 m projection.
 - (viii) RCC slab (1:2:4), 0.120 m thick.
 - (ix) UCR masonry (1:6) in plinth and foundation.
- Also show the positions of doors and windows.

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

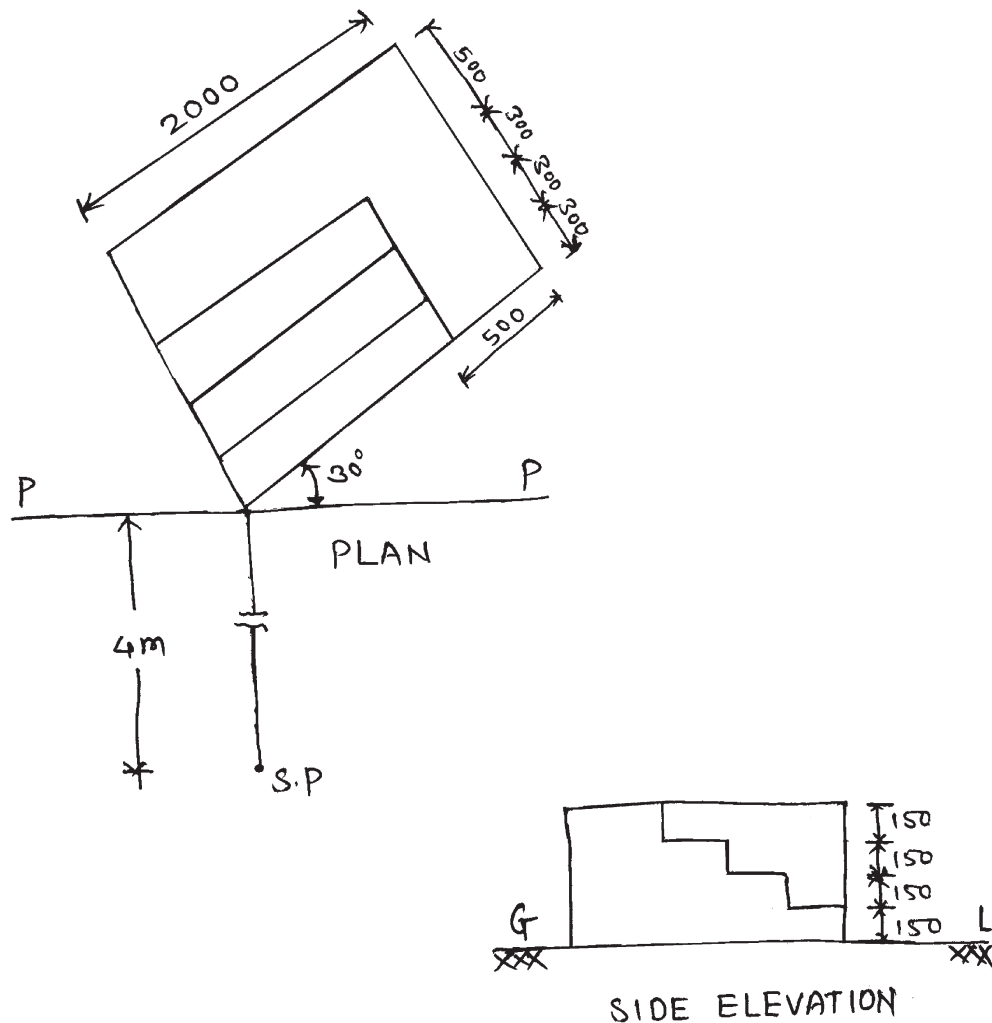
- a) Prepare schedule of openings and area statement for the Fig. no.-1, Que. No. 2 (Refer Figure No. 1 on Page No. 3)
- b) Draw a site plan for Fig No. 1, Que No. 2 and also state the importance of site plan.
- c) Enlist the principles of planning and explain Roominess in detail with sketch.
- d) Draw to a suitable scale foundation plan for the Fig No.1, Que No. 2.

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

- a) (i) Suggest various units with their sizes for Hospital building.
- (ii) Define the following terms used in perspective drawing.
 - 1) Vanishing point
 - 2) Picture plane
 - 3) Centre of vision
 - 4) Measure line

- b) Explain the following with sketches.
- Privacy
 - Set Back Distance
- c) (i) State the significance of building rules and bye-laws in relation to planning of building.
- (ii) State the importance of construction notes on building drawing sheets in relation with building construction.

5. Figure No. 2 Shows a plan and side elevation of steps. 12
 Draw the two point perspective view of the object to suitable scale taking station point at a distance 4m along the central visual ray. Assume eye level is at 1.5 m above the Ground level.



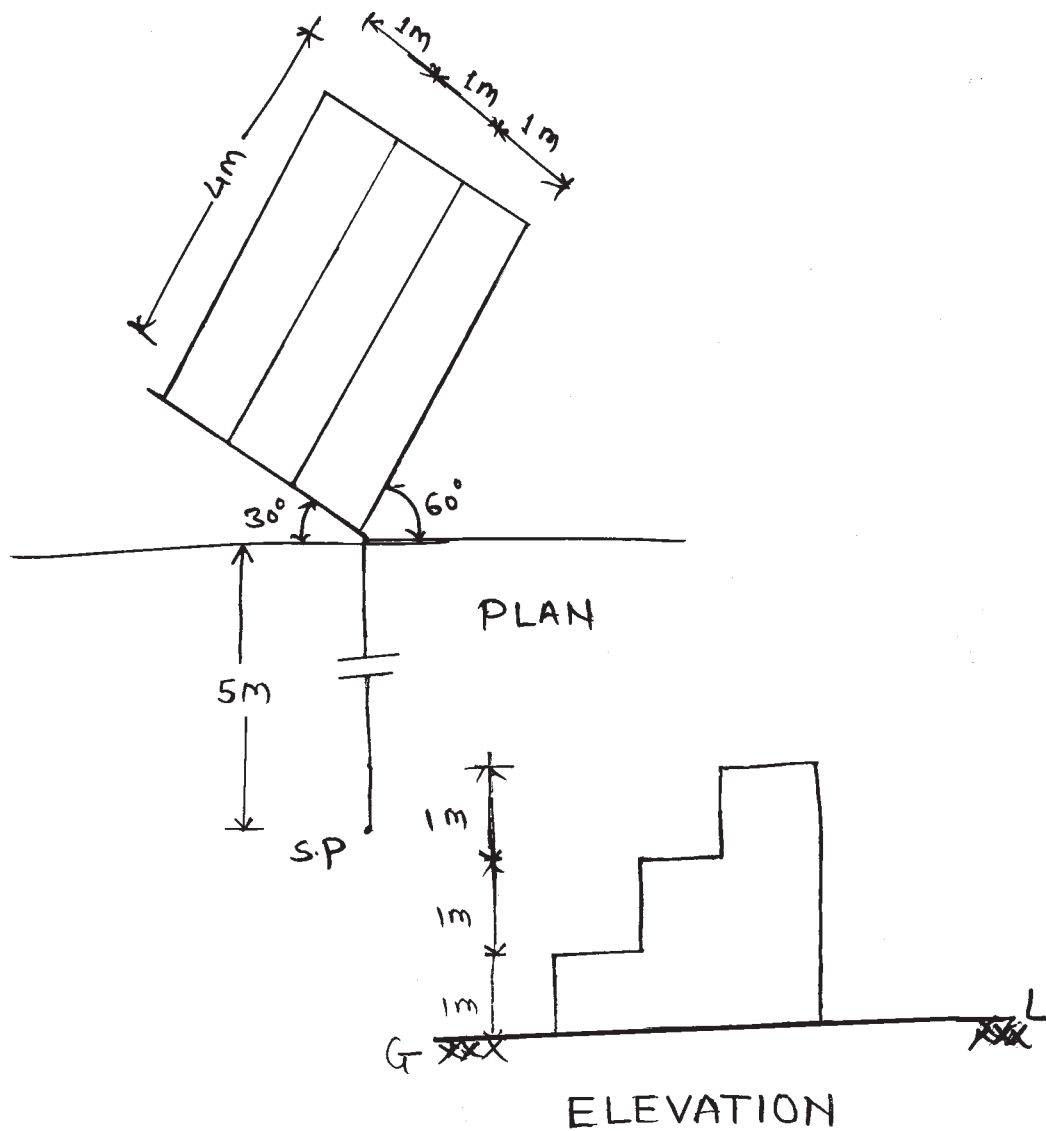
* All dimensions are in mm.

P.T.O.

Fig. No. 2

OR

Figure No. 3 shows a plan and elevation of steps. Draw to a suitable scale two point perspective view of the same. Assume eye level at 1.5 m above Ground level. Take station point at a distance 5 m along the central visual ray. 12

Fig. No. 3