Full Marks: 70   **Time: 3 hrs.**

(i) Use separate answer script for each half
(ii) One mark is reserved for neatness in each half.

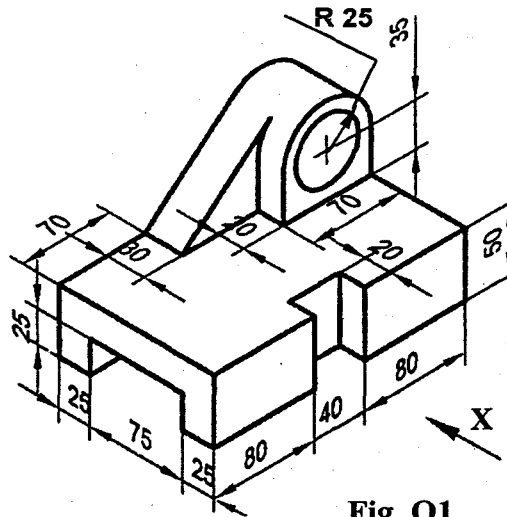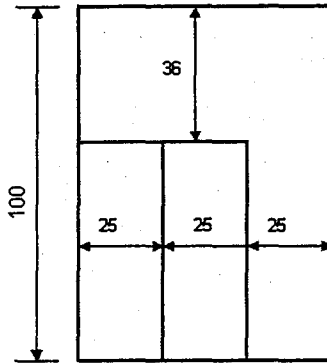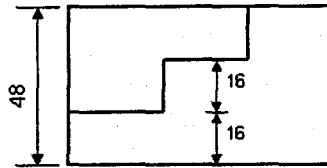### FIRST HALF
(Answer any two questions)

Fig. Q1

1. **Fig. Q1** represents the isometric view of a machine part. Draw the plan, elevation and left side view looking along the arrow.   [17]

2. A cylinder 50 mm diameter and 60 mm long, is resting on its base on the H.P. It is cut by a section plane perpendicular to the V.P. and 45° with the H.P. so that the axis is cut at a point 45 mm from the base of the cylinder. Draw its front view, sectional top view and true shape of the section.   [17]

3. The area of a field is 50000 m². The length and breadth of the field, on a map is 10 cm and 8 cm respectively. Construct a suitable scale which can read a minimum of 1 m to a maximum of 500 m. Mark a length of 236 m on the scale.

                                                         [17]

4. Draw the isometric projection of the object whose plan and elevation are shown below.

[17]

5. A pentagonal pyramid, base 25mm side and axis 50mm long has one of its triangular faces in the V.P., and the edge of the base contained by that face makes an angle of 30° with the H.P. Draw the plan, elevation and left side view of the pentagon.

[17]

6. A line AB, 50 mm long, is inclined to the HP at 30° and to the VP at 45°. The point A is 20 mm above the HP and 35 mm in front of the VP. Draw the projections of the line including side view. Assume that the end A is nearer to both the reference planes than end B.

[17]