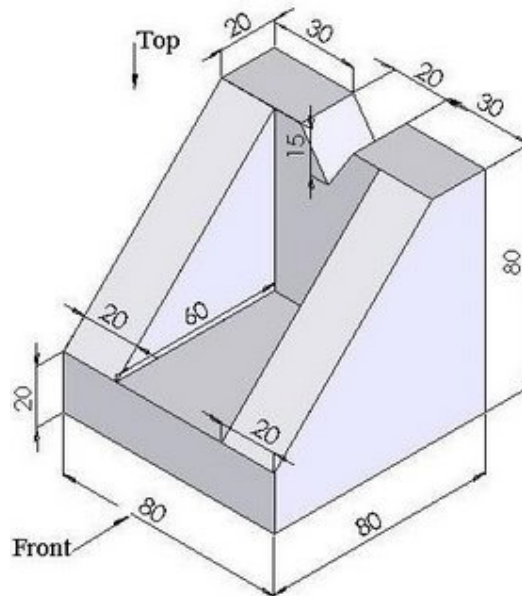


SET - 1

## Max. Marks: 70

**PART – A**

1. For the following figure draw (i) front view (ii) top view (iii) side view. (14M)



**PART- B**

2. a) The foci of an ellipse are 90 mm apart and the minor axis is 65 mm long. Determine the length of major axis and draw half the ellipse by Arcs of circles method and the other half by Oblong method. (7M)
- b) The area of the field is 50,000 sq m. The length and the breadth of the field, on the map is 10 cm and 8 cm respectively. Construct a diagonal scale which can read up to 400 meter. Mark the length of 275 meter on the scale. What is the R.F. of the scale? (7M)
3. a) A point 30 mm above xy line is the plan of two points P and Q. The elevation of P is 45 mm above the HP while that of the point Q is 35 mm below the HP. Draw the projections of the points and state their position with reference to the principal planes and the quadrant in which they lie. (7M)

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**R16**

**SET - 1**

- b) A vertical line AB, 75 mm long, has its end A in the HP and 25 mm in front of the VP. A line AC, 100 mm long, is in the HP and parallel to VP. Draw the projections of the line joining B and C, and determine its inclination with the HP. (7M)
4. The front view of a line PQ makes an angle of  $30^\circ$  with xy. The H.T. of the line is 45 mm behind the VP. While its V.T. is 30 mm above the HP. The end P of the line is 10 mm below the HP and the end Q is in the first quadrant. The line is 150 mm long. Draw the projections of the line and determine the true-length of the portion of the line which is in the second quadrant. Also find the angle of the line with the HP and VP. (14M)
5. A semi-circular plate of 80 mm diameter has a its straight edges in the VP and inclined at  $45^\circ$  to the HP. The surface of the plate makes an angle of  $30^\circ$  with the VP. Draw its projections. (14M)
6. A cylinder block, 75 mm diameter and 25 mm thick, has a hexagonal hole of 25 mm side, cut centrally through its flat faces. Draw three views of the block when it has its flat faces vertical and inclined at  $30^\circ$  to the VP and two faces of the hole parallel to the HP. (14M)
7. Draw the Isometric views for the following figure. (14M)

