



- Notes :
1. All questions carry equal marks.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Retain the construction lines.
 5. Illustrate your answers wherever necessary with the help of neat sketches.
 6. Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.

1. a) Inscribe an ellipse in a parallelogram having sides 150 mm and 100 mm long and an included angle of 120° **8**
- b) A circle of 50 mm diameter rolls along a straight line without slipping. Draw the curve traced out by a point 'p' on the circumference, for one complete revolution of the circle name the curve. **8**

OR

2. a) The top view of a 75 mm long line AB measures 65 mm, while the length of its front view is 50 mm. Its one end A is in the H. P. and 12 mm in front of the V.P. Draw the projection of AB and determine its inclinations with the H.P and the V.P. **8**
- b) A line AB, 65 mm long, has its end A 20 mm above the H.P. and 25 mm in front of the V.P. The end B is 40 mm above the H. P. and 65 mm in front of the V.P. Draw the projections of AB and show its inclinations with the H.P. and the V.P. **8**
3. a) A thin rectangular plate of sides ~~60mm~~ \times ~~30mm~~ has its shorter side in the V. P. and inclined at 30° to the H.P. project its top view if its front view is a square of 30 mm long sides. **8**
- b) Draw the projections of a regular hexagon of 25 mm side, having one of its side in the H.P. and inclined at 60° to the V.P. and its surface making an angle of 45° with the H.P. **8**

OR

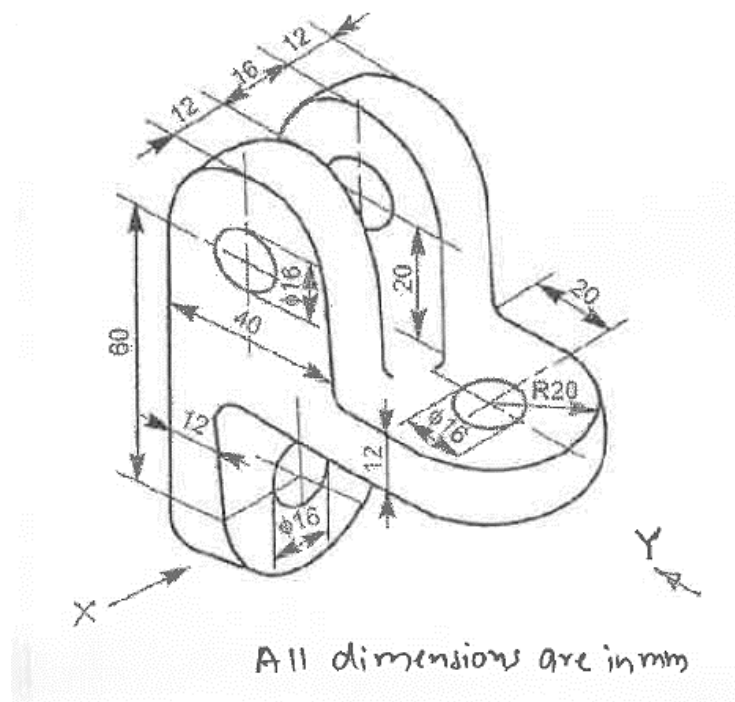
4. A square prism, base 40 mm side and height 65 mm, has its axis inclined at 45° to the H. P. and has an edge of its base, on the H. P. and inclined at 30° to the V.P. Draw its projections. **16**
5. A hexagonal pyramid, base 30 mm side and axis 65 mm long, is resting on its base on the H. P. with two edges parallel to the V. P. It is cut by a section plane, perpendicular to the V.P. inclined at 45° to the H.P. and intersecting the axis at a point 25 mm above the base. Draw the front view, sectional top view, sectional side view and the true shape of the section. **16**

OR

6. A hexagonal pyramid, base 30 mm side and axis 60 mm long, has a triangular face on the H.P. and the axis parallel to the V.P. It is cut by a horizontal section plane which bisects the axis. Draw the front view and sectional top view and develop the surface of the cut-pyramid. **16**

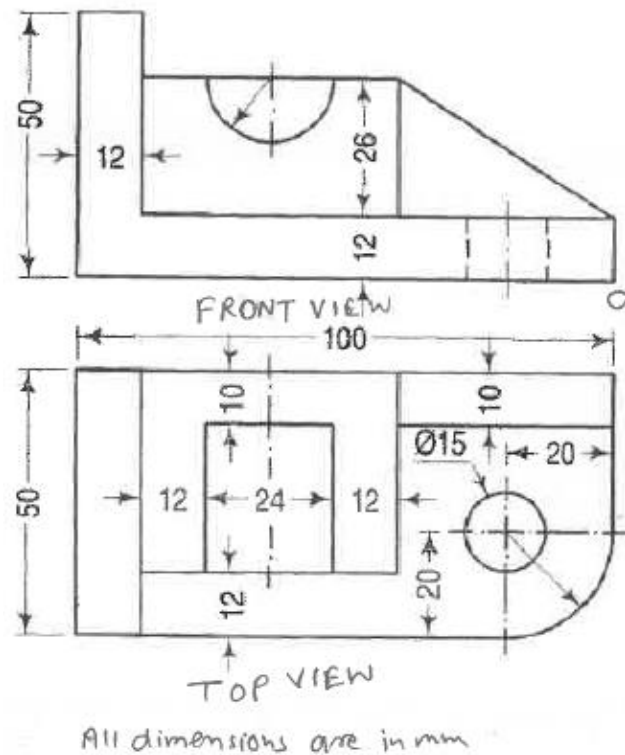
7. The figure shows the pictorial view of an object. Draw the following views.

- Front view looking in the direction X
- Side view looking in the direction Y
- Top view



OR

8. Draw isometric view of an object whose front view and top view are given below.



9. a) What is Drawing annotations. Explain with suitable example.

- b) What are the various ways of drawing circle in Auto CAD. 4
- c) What is Array state its types and uses. 4
- d) Explain the use of Hatch command in Auto CAD. 4

OR

10. Write short notes on.

- a) Dimensioning in Auto CAD. 4
- b) CAD applications and benefits 4
- c) WCS and UCS. 4
- d) Layers in Auto CAD. 4
