K. J. Somaiya College of Engineering, Mumbai-77
(A Constituent College of Somaiya Vidyavihar University)

F.Y. BTech Sem. I – (Academic Year 2022-23)

List of Problems to be solved in AutoCAD Practical

Sheet No. 1 (Projection of Lines & Planes)

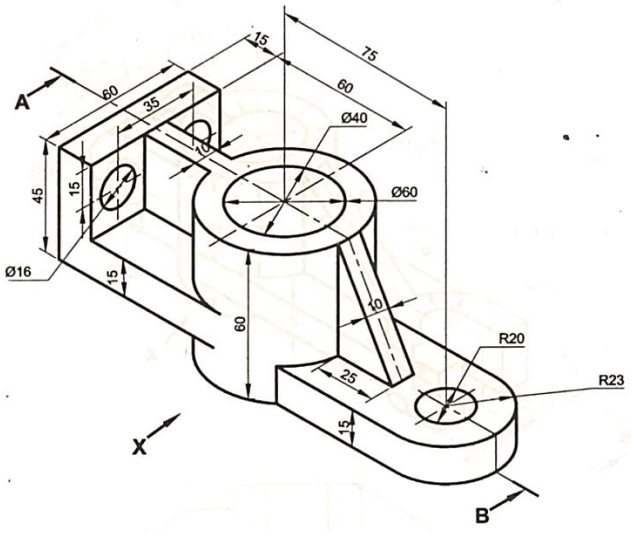
CO_1: Projection of lines and planes**.**

1. Elevation of a line AB is 75 mm and is inclined to XY line at 45°. End A is 25 mm above HP and end B is 10 mm behind VP. Draw its projection if the line is 95 mm and end B is in third quadrant. Find the inclination of line AB with HP and VP.
2. A line PQ 100 mm long is inclined at 40° to the HP and 30° to the VP. Its end P is 30 mm above the HP and 40 mm in front of VP. The end Q is in the third quadrant. Draw the projection of the line.
3. ABC is a thin triangular plate having its edges AB, BC and CA equal to 55mm, 70mm and 45mm respectively. The edge AB rests on HP and has point A towards VP and 20 mm away from it. The plane of plate is inclined to HP at 40^0. Draw the projections of plate.
4. Draw the projections of a circular plate of 70 mm diameter having end A on a diameter AB in VP and the plane of circle is inclined at 45^0 to VP.

Sheet No. 2 (Orthographic and Sectional Orthographic Projections)

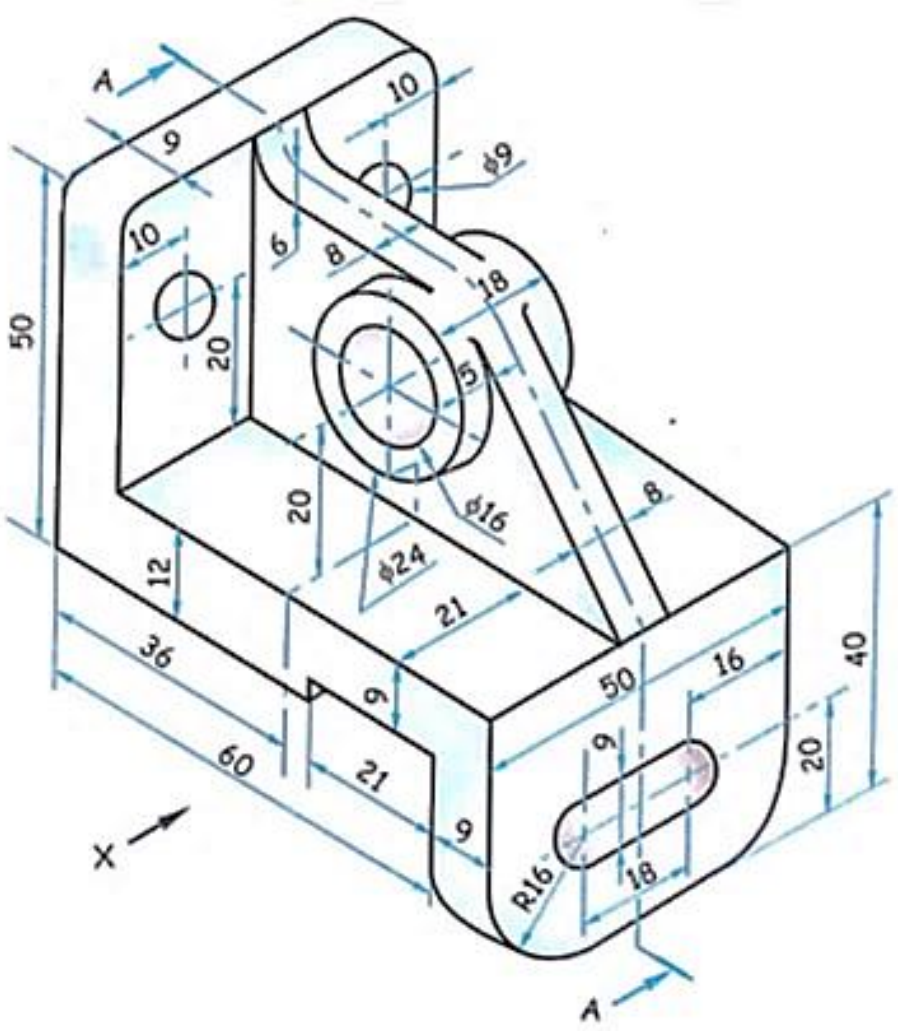
CO_2: Orthographic and sectional views of any 3D object**.**

1. Using First angle Projection method draw F.V. in the direction of arrow X, T.V., and R.H.S.V. of diagram shown below.



2. Figure shows pictorial view of C.I. Block. Draw the following views by using first angle method of projection,

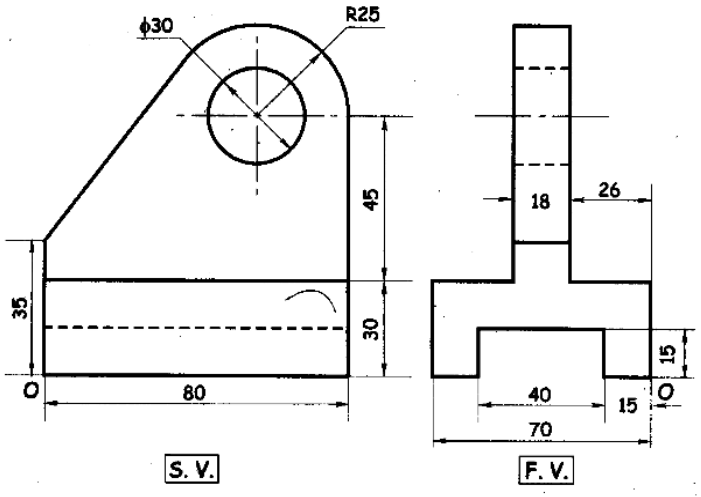
- Sectional FV along the direction X and along section plane A-A;
- Top View
- RHSV



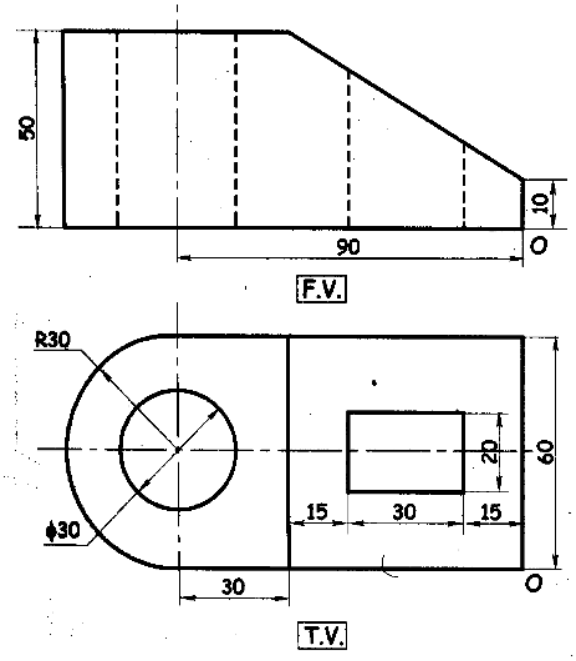
Sheet No. 3 (Isometric drawing**)**

CO 3: Isometric drawing**.**

1. Figure shows the front view and side view of an object. Draw isometric drawing about an origin 'O' shown.



2. Figure shows the Front view and Top View of an object. Draw isometric drawing about an origin 'O'.



Sheet No. 4 (Projection of Solids)

CO 4: Projection of regular solids.

1. A pentagonal pyramid, 50 mm side of base and 80 mm height, rests on one of its corner of the base on the H.R.P. with axis making an angle of 30^0 to the HP. The side of the base, opposite to the corner on the H.R.P., is parallel to the VP. Draw the projection of pyramid.

2. A cone of 50 mm diameter of the base and 65 mm length of the axis is having one of its generators in the VP and inclined at 30^0 to the HP. Draw projections of solid.

Sheet No. 5 (Section of Solids and development)

CO 5: Section and lateral development of regular solids.

1. A pentagonal prism has one of the rectangular face normal to HP and VP. A section plane perpendicular to VP and inclined at 45^0 to HP cuts the axis of prism at a point 20 mm from the top. If base of prism is of 30 mm side and axis 70 mm long, draw its FV, Sec. TV, Sec. LHSV and true shape of section.

2. A Right circular cylinder 50 mm diameter base, 70 mm length of axis, has its base inclined 30^0 to H.P and perpendicular to V.P. It is cut by a section plane perpendicular to V.P and inclined to the H.P such that the angle between the axis of cylinder and cutting plane is 30^0. Assume that the cutting plane is passing through the point on the axis 20 mm from the top. Draw Front view, Sectional top view, and true shape of section. Also draw the development of lateral surface of cylinder.