F.Y. BTech Sem. I – (Academic Year 2020-21)

List of Problems to be solved in AutoCAD Practical

Sheet No. 1 (Projection of Lines & Planes)

CO 1: Projection of lines and planes.

1. A straight line AB of true length 100 mm has its end A 20 mm above HP and 30 mm in front of VP. The top view of the line is 80 mm and front view is 70 mm. Draw the projections (TV and FV) of the line AB and obtain the true inclinations of the line AB with HP and VP.

2. The end A of a straight line AB 90 mm long is in the second quadrant and 15 mm from both the HP and VP. End B is in third quadrant. The line is inclined at 30° with the HP and the distance between the end projectors measured parallel to the XY line is 60 mm. Draw the projections of line and find its inclination with the VP.

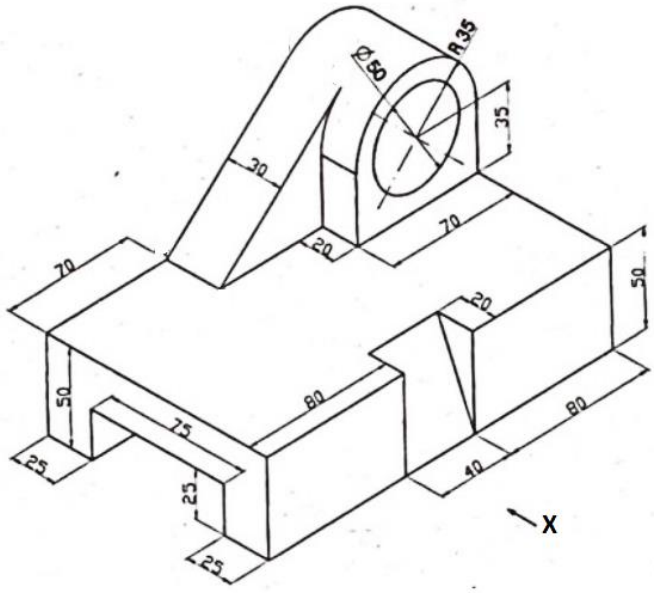
3. A square lamina of side 80 mm rests on a corner on H.P. and it is inclined with H.P. such that its plan is a rhombus with a diagonal of 40 mm. Determine its inclination with H.P. and draw its projections.

4. A regular hexagonal plate ABCDEF has its corner A in the VP. The plate is inclined to the VP at 45°. Draw its projections. The side of the plate is 35 mm.

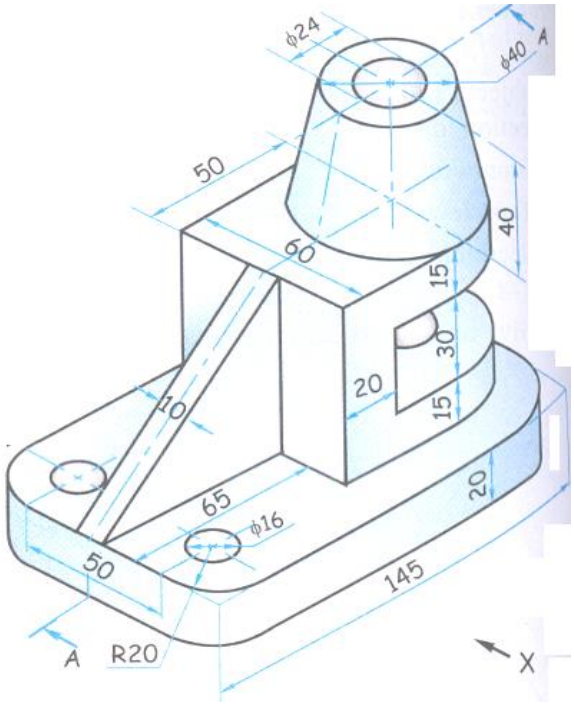
Sheet No. 2 (Orthographic and Sectional Orthographic Projections)

CO 2: Orthographic and sectional views of any 3D object.

1. Figure shows pictorial view of object. Draw the following views using the first angle method of projections, a) Plan b) Elevation in the direction of arrow X c) Left Hand Side View.



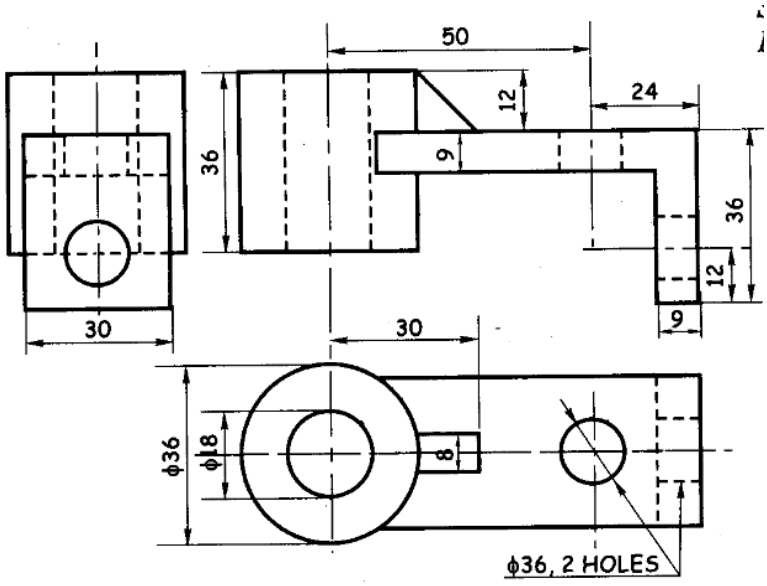
2. Figure shows pictorial view of Object. Draw using first angle method of projections, i) Sectional Front view along A-A; ii) Top View; iii) LHSV.



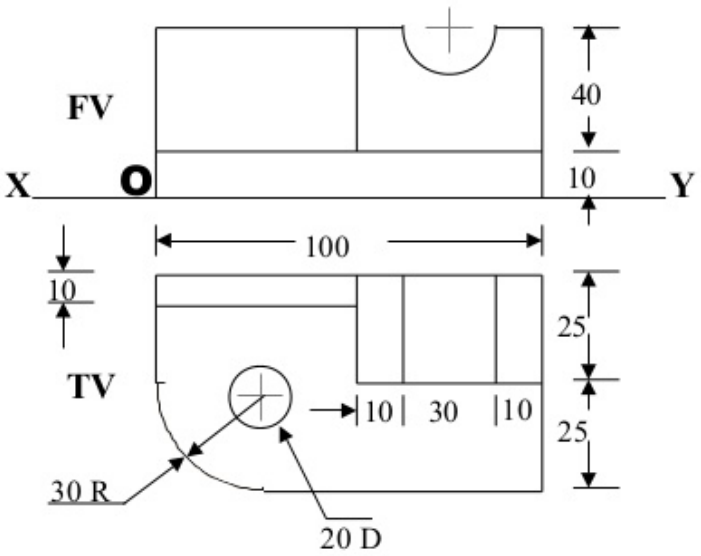
Sheet No. 3 (Isometric drawing)

CO 3: Isometric drawing.

1. Figure shows the front view and Top view of an object. Draw its isometric Drawing about an origin 'O'.



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



Sheet No. 4 (Projection of Solids)

CO 4: Projection of regular solids.

1. A cylinder of base diameter 50 mm and axis 70 mm has a point of its base circle in the VP. Its axis is inclined at 30° to the VP and 45° to the HP. Draw its projections.

2. A square prism, side of base 40mm and length of axis 70mm, has an edge of its base in the VP. The axis is making an angle of 55° with the VP and its elevation is making 45° with XY. Draw the projections of solid.

Sheet No. 5(Section of Solids and development)

CO 5: Section and lateral development of regular solids.

1. A square pyramid of 30 mm edges of base and 50 mm height is resting on its base with one of the edges of the base perpendicular to the VP. It is cut by an auxiliary inclined plane in such a way that it bisects the axis and is inclined at 45º to the HP. Draw elevation, sectional plan, sectional end view and the true shape of section.

2. A cone of base 70 mm diameter and axis 90 mm long is resting on its base on HP. It is cut by a section plane perpendicular to VP and parallel to and 15 mm away from one of its end generators. Draw the sectional top view, front view, sectional side view and the true shape of a section. Also draw the development of lateral surface.