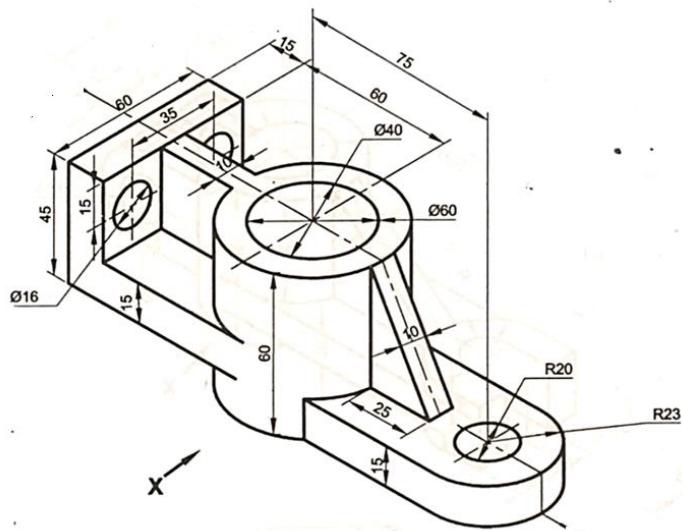


## **List of Problems to be solved in Sketch book**

Sheet:-1

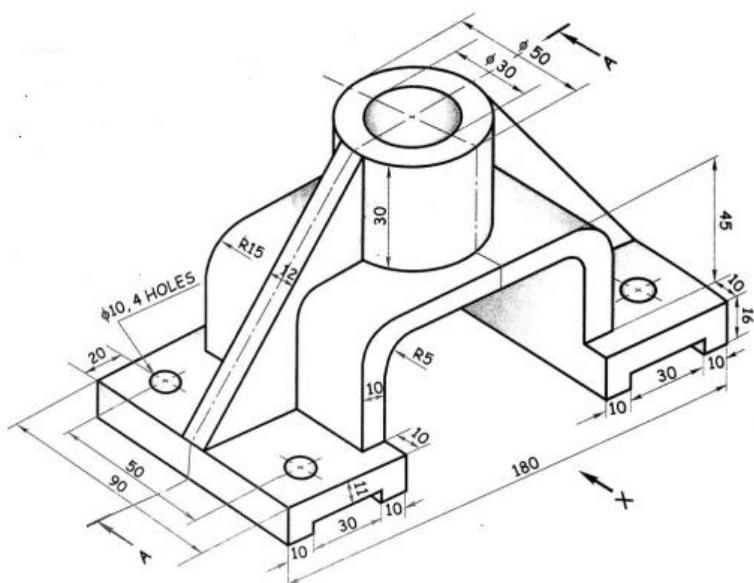
**CO<sub>1</sub>:** Visualize and draw orthographic projection and sectional views of any 3D object.

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



2. Draw the following views for the given object by using first angle method of projection,

  - Sectional FV along the section plane A-A;
  - Top View and
  - LHSV



**Sheet:-2**

**CO<sub>2</sub>:** Visualize and draw projection of lines and planes.

1. A line PQ 100 mm long is inclined at  $40^\circ$  to the HP and  $30^\circ$  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 first quadrant. Draw the projection of the line.
2. The FV of line AB 70 mm long is inclined at  $45^\circ$  to XY, measures 50 mm. The end point A is 10mm above HP and 20 mm in front of VP. Draw projections of line AB and find inclination with HP and VP. Point B lies in first quadrant.
3. A pentagonal plate of 25 mm side has one of its sides in HP. Draw its projections if its surface is inclined at  $45^\circ$  to the HP.
4. A regular hexagonal lamina of side 25 mm is resting in VP on one of its corner. Draw the projections if diagonal passing through that corner makes an angle of  $30^\circ$  to the VP.

**Sheet:-3**

**CO<sub>3</sub>:** Draw 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  $30^\circ$  to the HP. Draw the projection of pyramid.
2. A cylinder of 50 mm diameter of the base and 65 mm axis length is resting on its base in VP. The base of cylinder is inclined at  $45^\circ$  to VP draw the projections of cylinder.

**Sheet:-4**

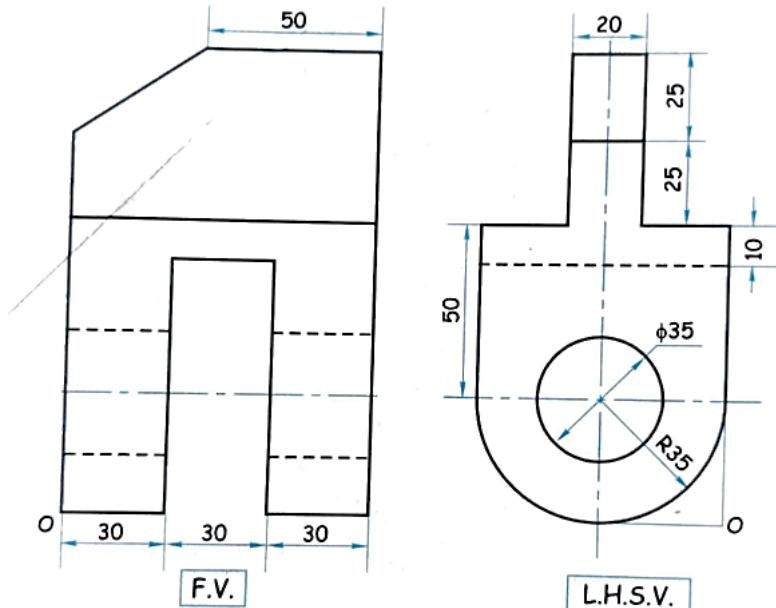
**CO<sub>4</sub>:** Draw sectional views and lateral development of regular solids.

1. 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 front view, sectional top view and the true shape of a section. Also draw the development of lateral surface.
2. A pentagonal prism has one of the rectangular face normal to HP and VP. A section plane perpendicular to VP and inclined at  $45^\circ$  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, sectional TV, and true shape of section.

**Sheet:-5**

**CO<sub>5</sub>:** Visualize and draw isometric drawing.

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



2. Figure shows the front view and Top view of an object. Draw isometric drawing about an origin ‘O’.

