

Module 2

SECTIONAL ORTHOGRAPHIC PROJECTION

Sheba Varghese
Assistant Professor,
Dept. Of Mechanical Engineering,
Room : A (310), KJSCE, Vidyavihar
Email : sheba@somaiya.edu

Precedence of Lines

- Visible lines takes precedence over all other lines.
- Hidden lines and cutting plane lines take precedence over center lines
- Center lines have lowest precedence
- **NOTE:**

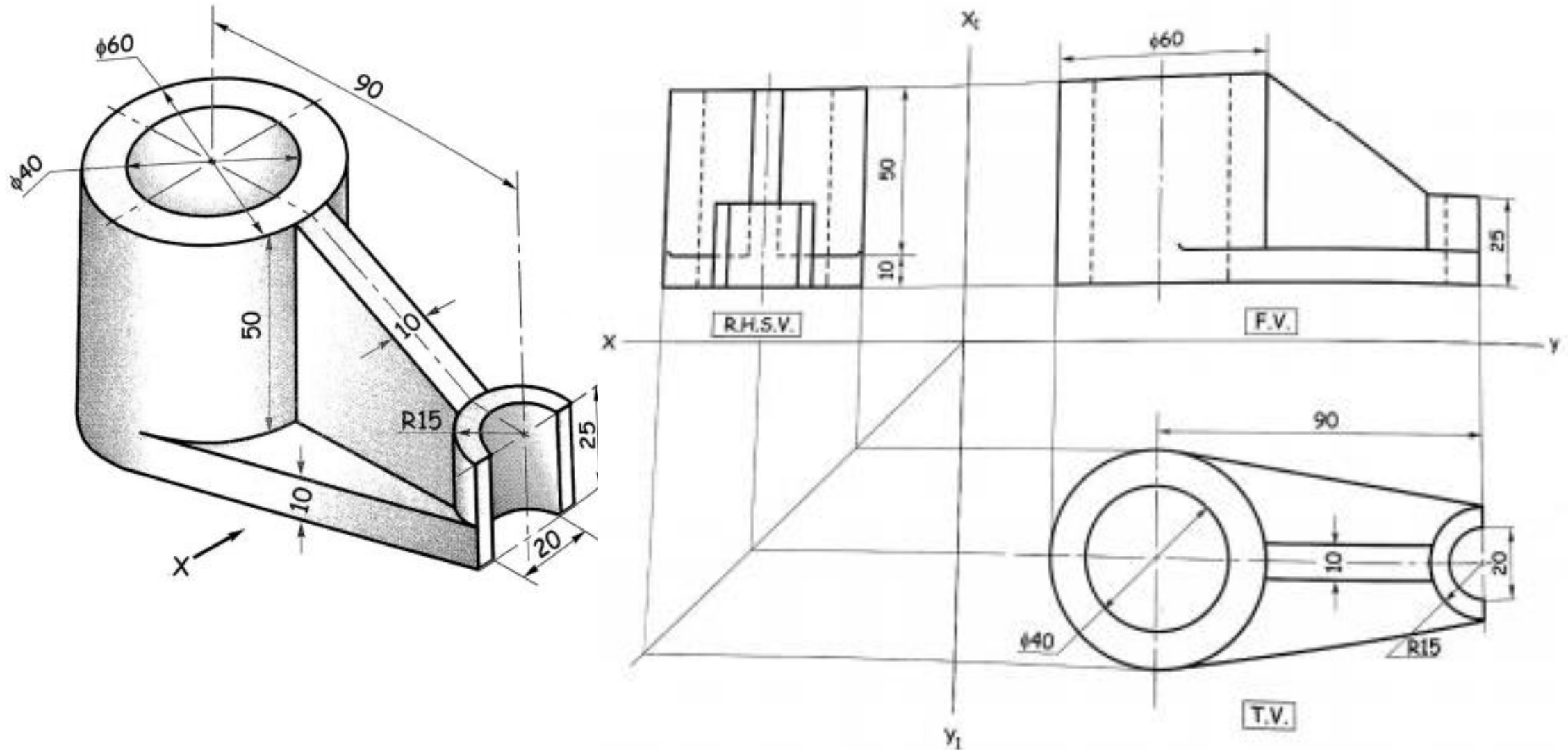
When the Visible line coincides with hidden or center line

- Visible line is shown

Hidden line coincides with center line

- Hidden line is shown

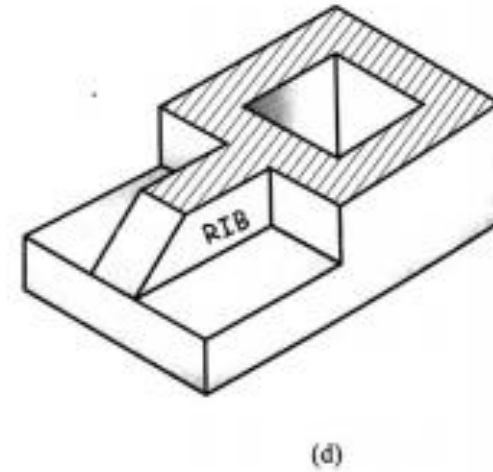
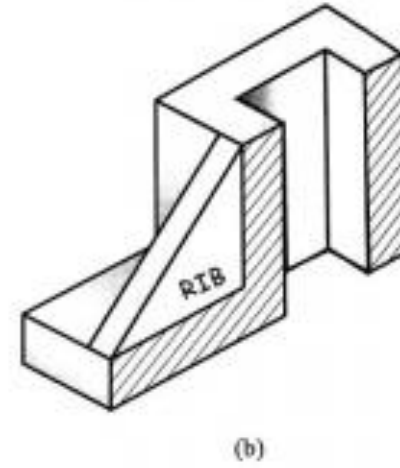
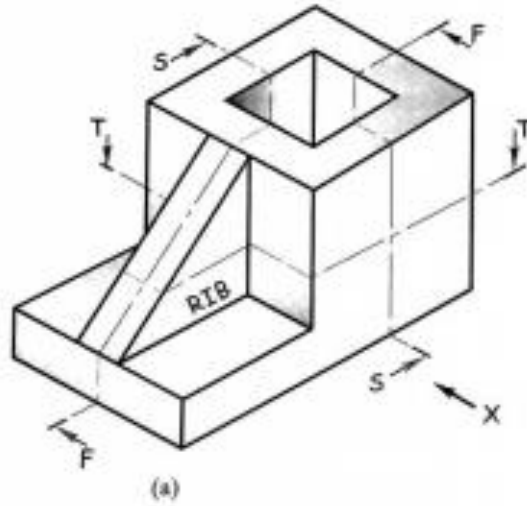
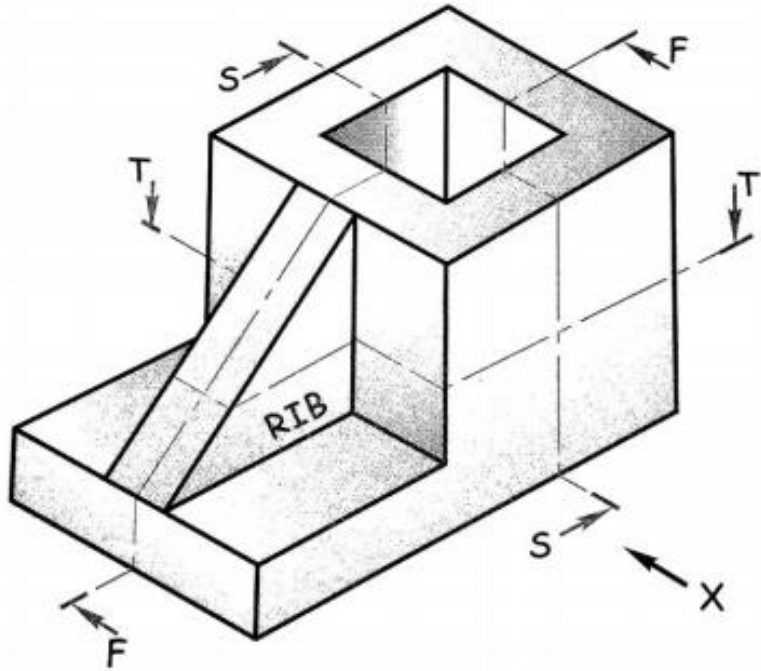
Orthographic projection



Sectional Orthographic Projection

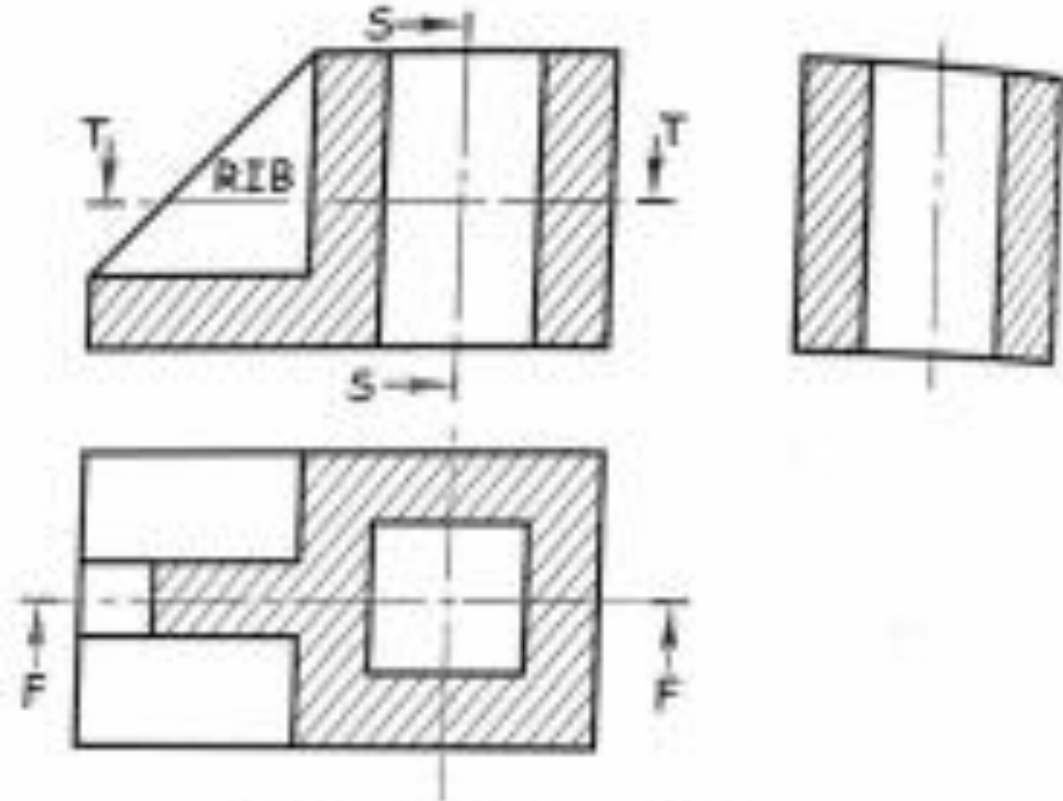
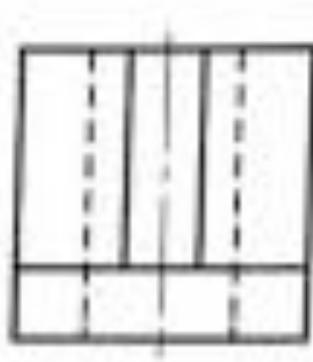
- For complicated objects when the hidden lines are large in number the drawing is difficult to interpret. To overcome this difficulty sectional orthographic projection is introduced.
- In sectional orthographic projection the portion of an object which is cut is hatched by 45 degree incline thin line evenly placed.
- As per cutting plane line position when section is assumed in one view it does not affect other views of object.
- Visible lines behind the section are shown.
- Invisible lines behind the section are usually omitted.

Sectional Orthographic Projection

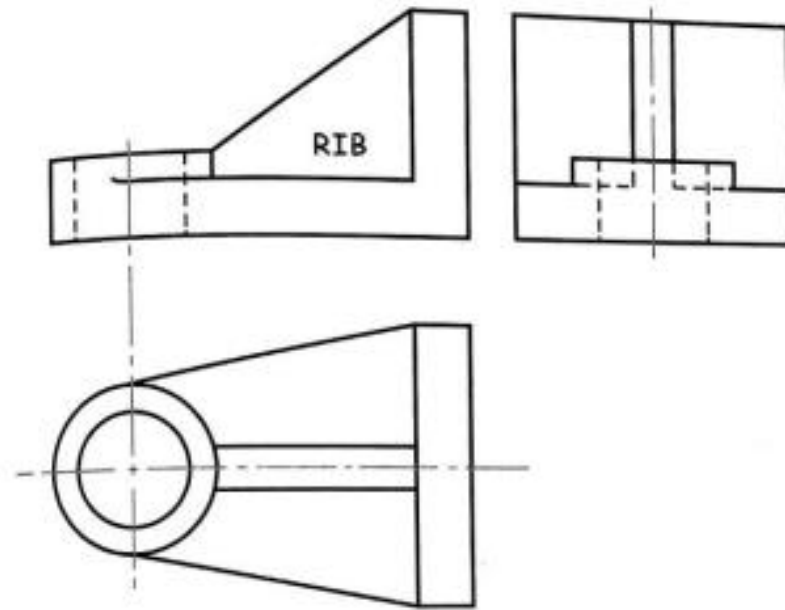
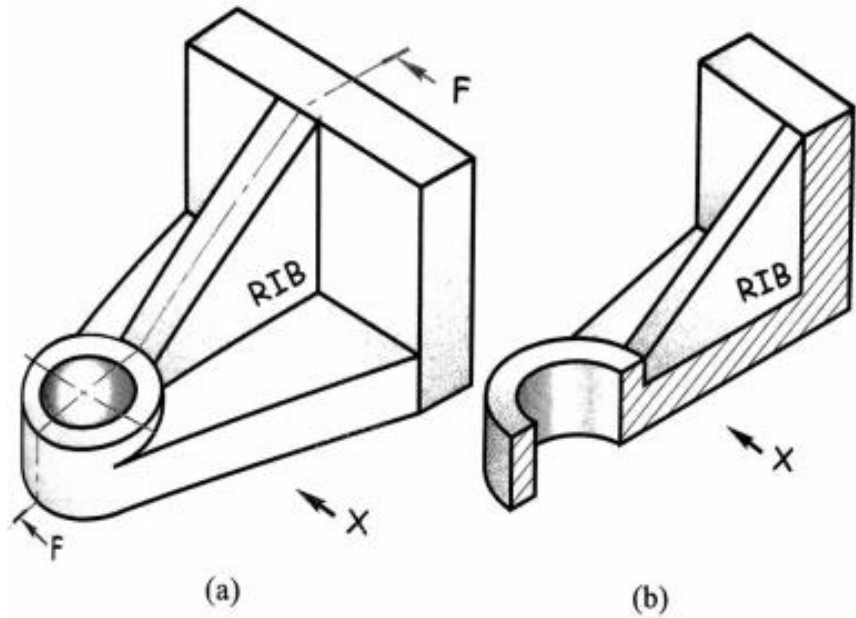




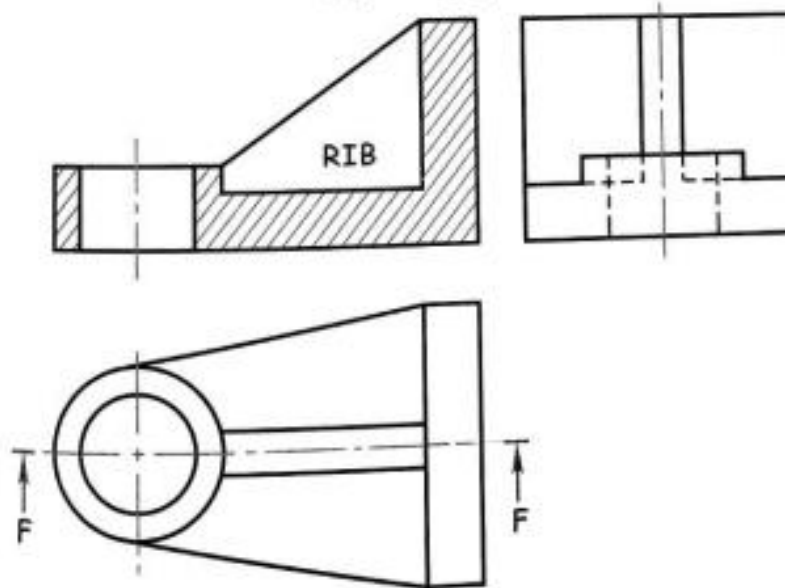
(e) Orthographic View



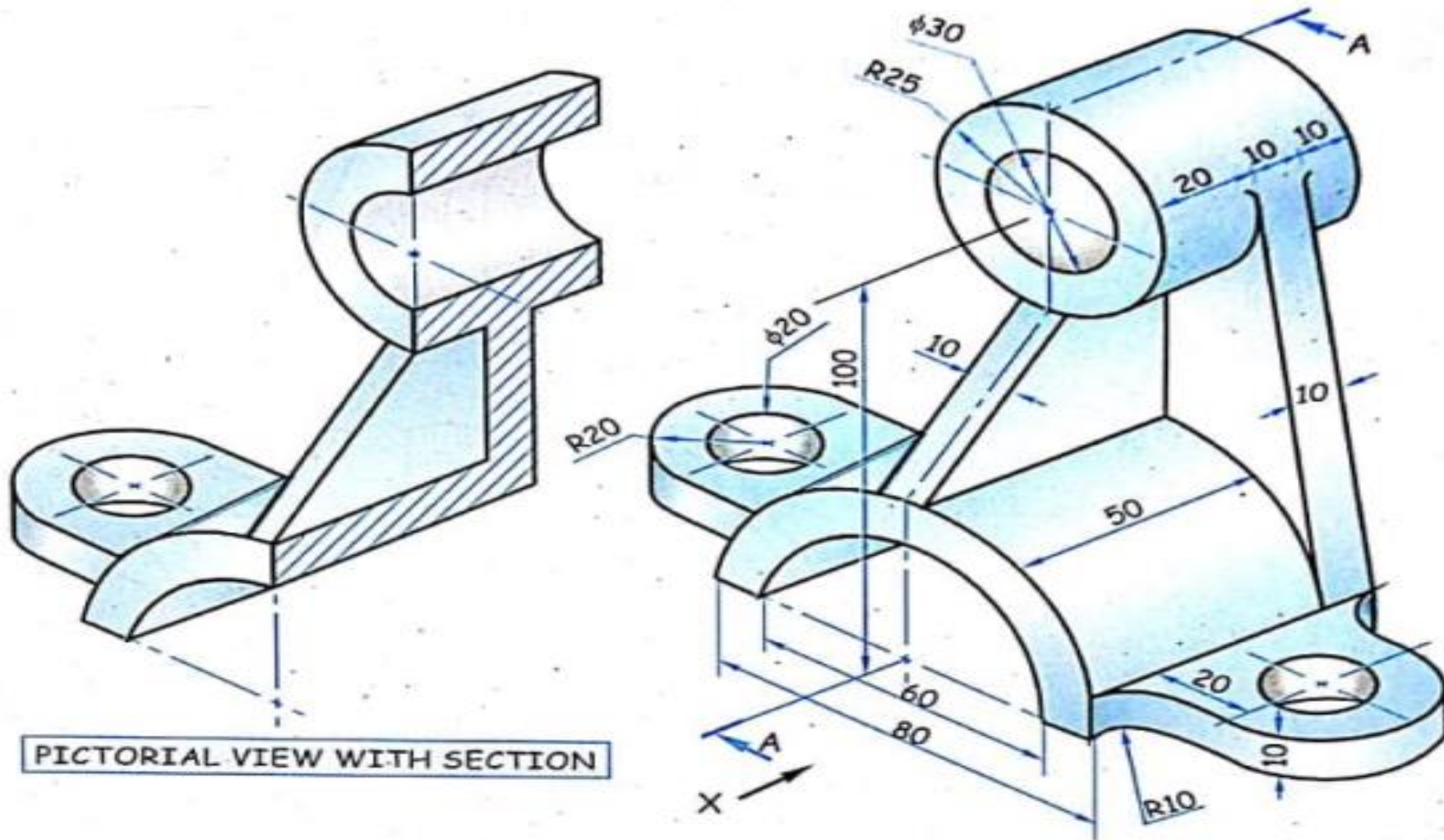
(f) Sectional Orthographic View



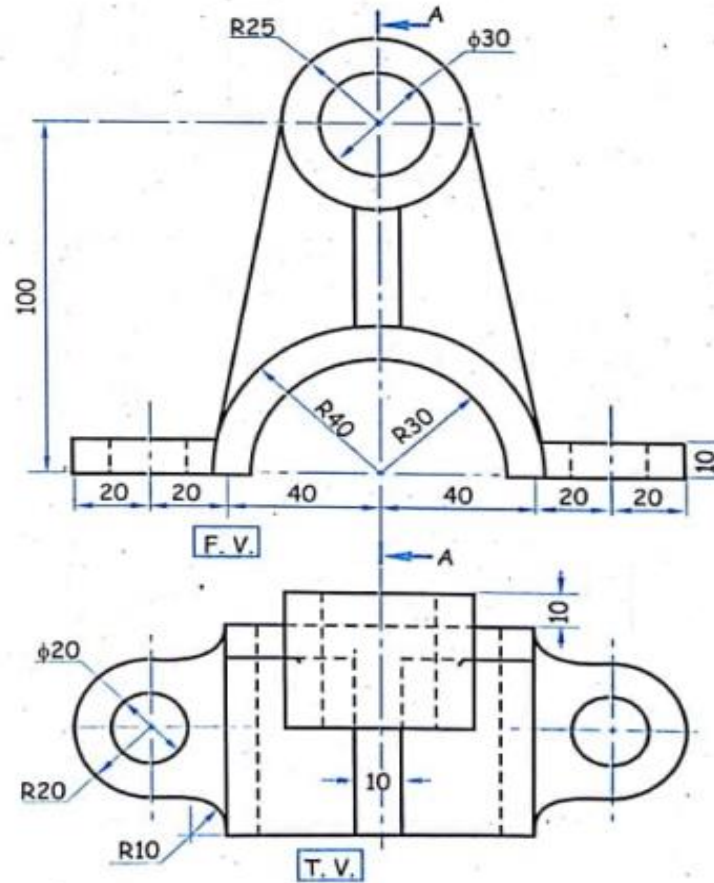
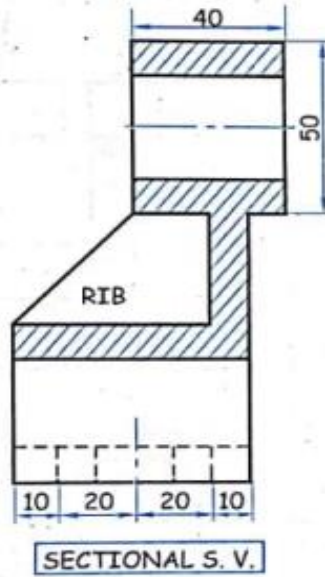
(c) Orthographic View



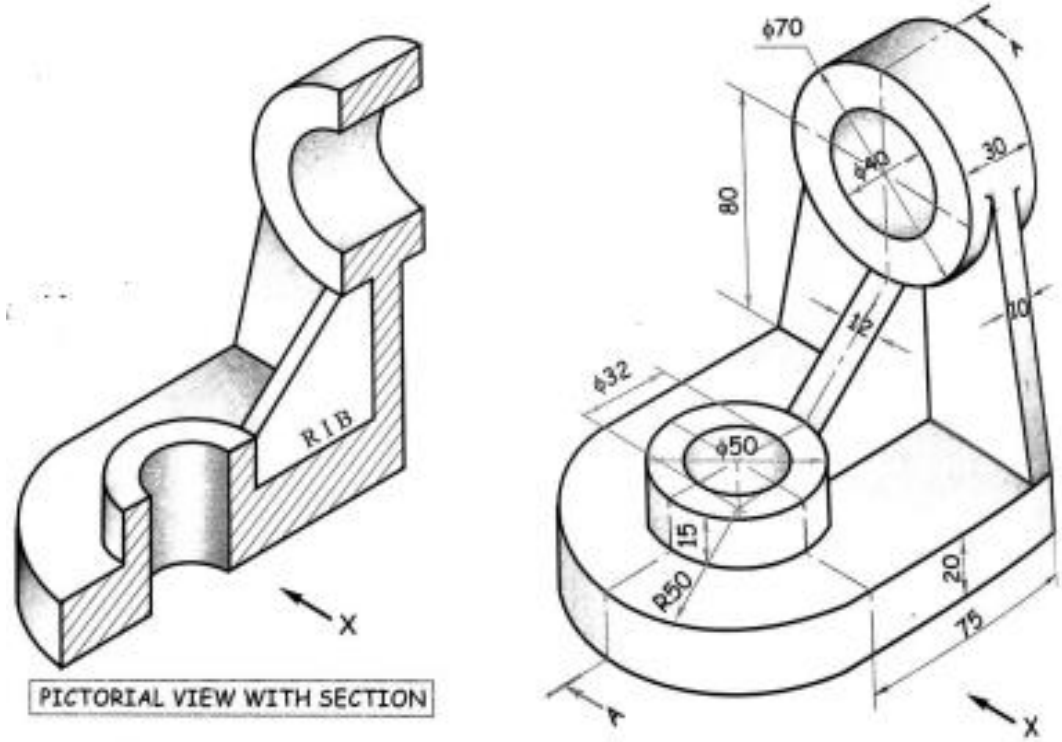
Draw the T.V, F.V & Section R.H.S.V



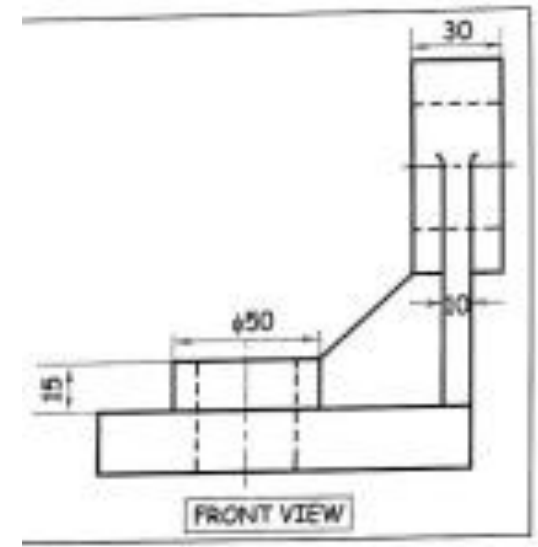
Draw the T.V, F.V & Section R.H.S.V



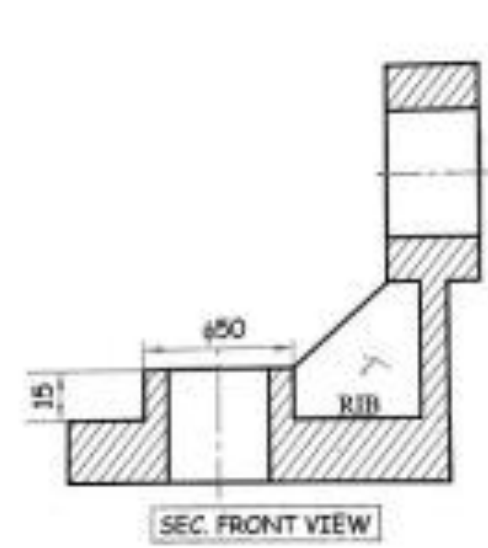
Draw the T.V, Sectional F.V & L.H.S.V



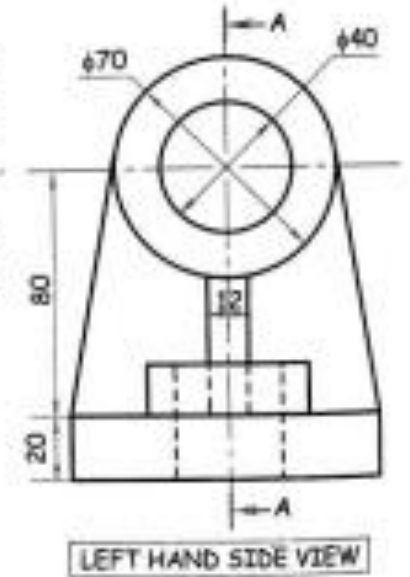
PICTORIAL VIEW WITH SECTION



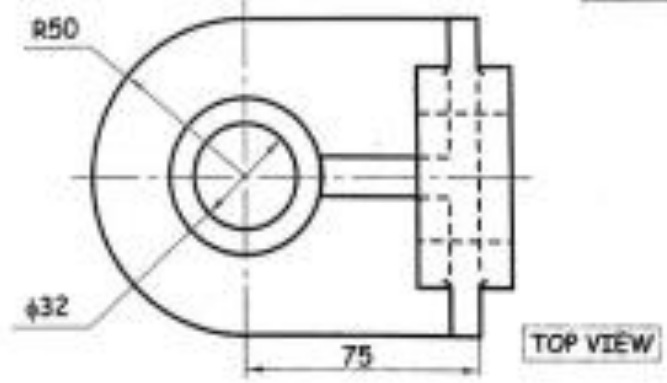
FRONT VIEW



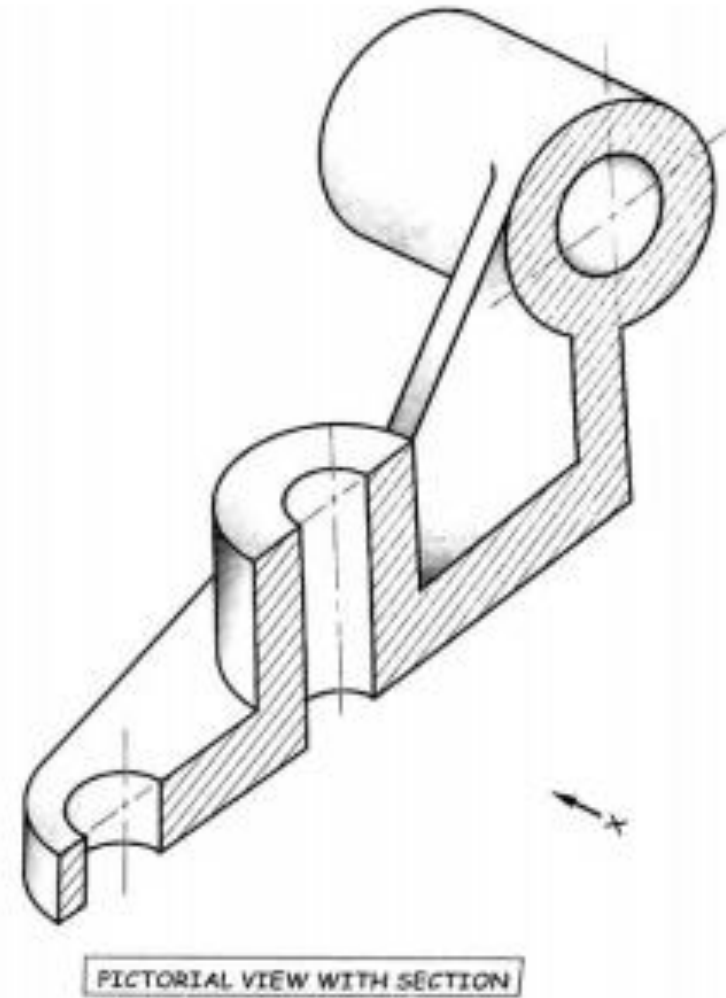
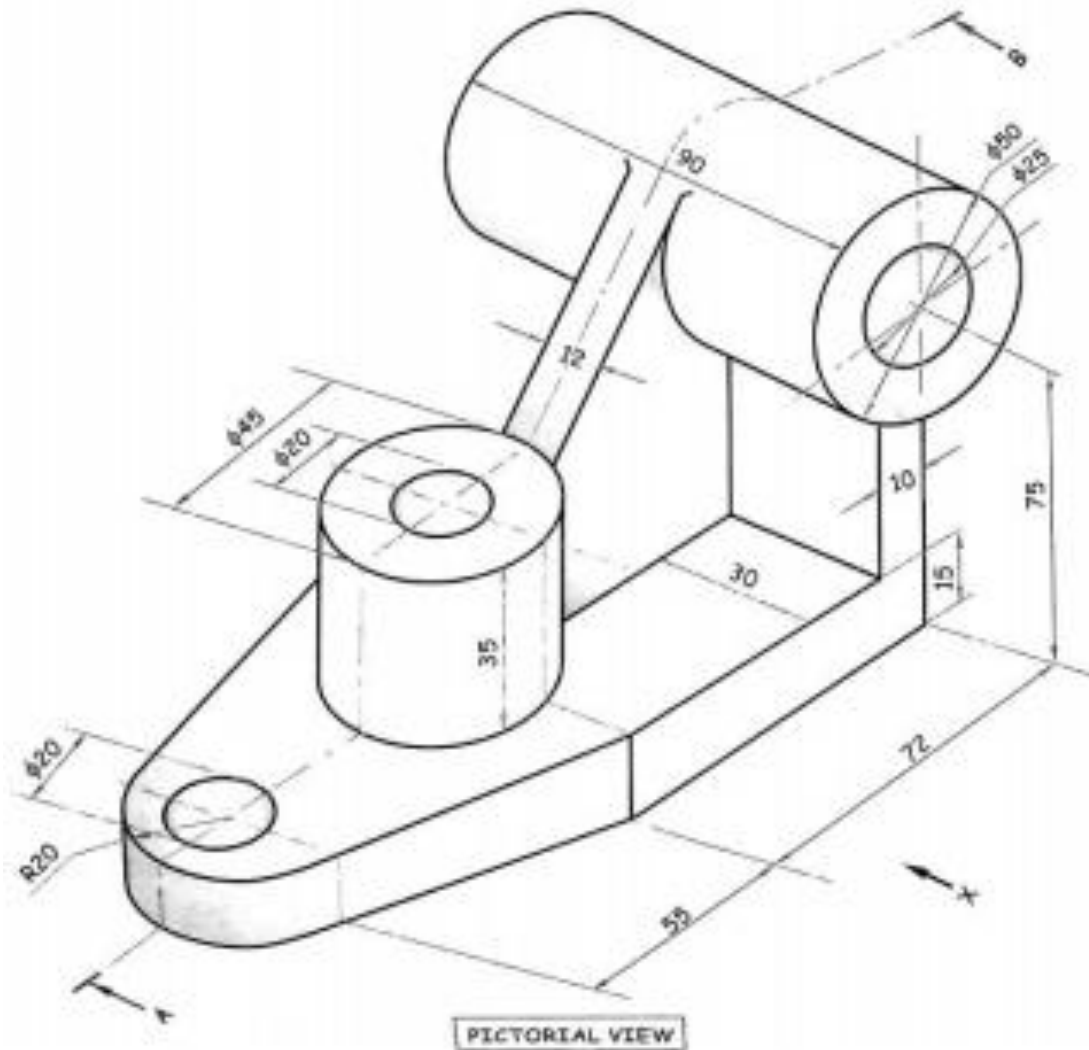
SEC. FRONT VIEW



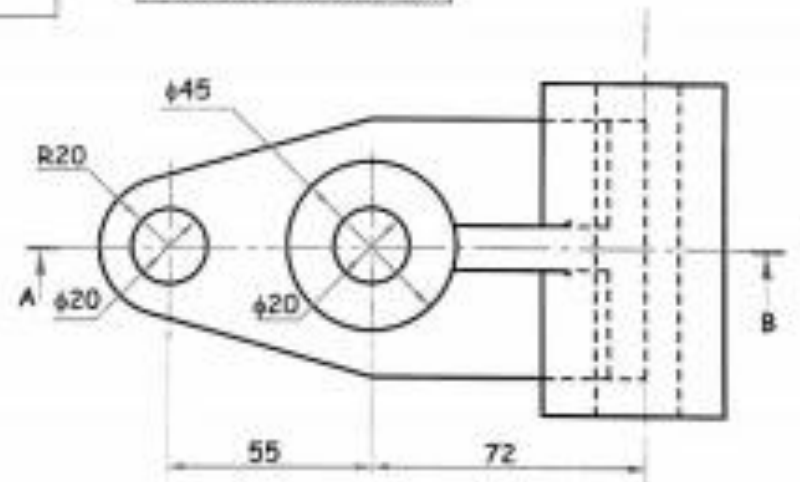
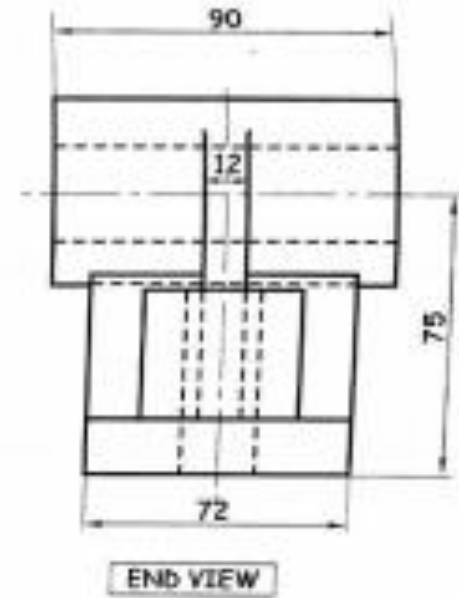
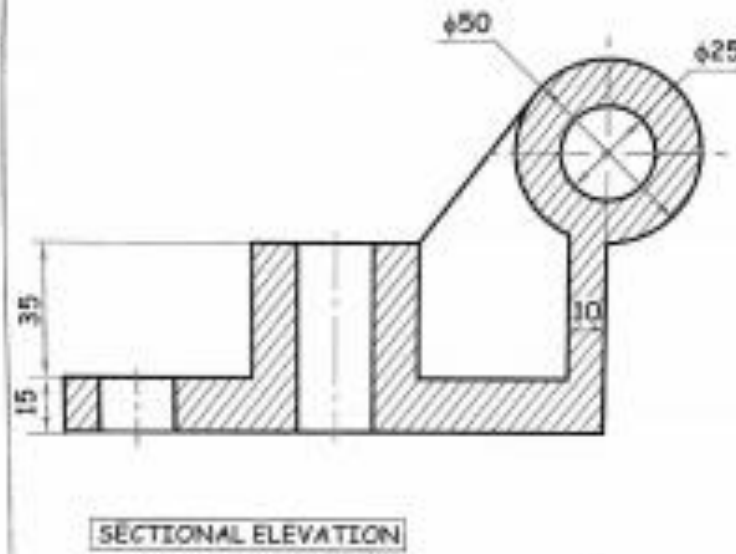
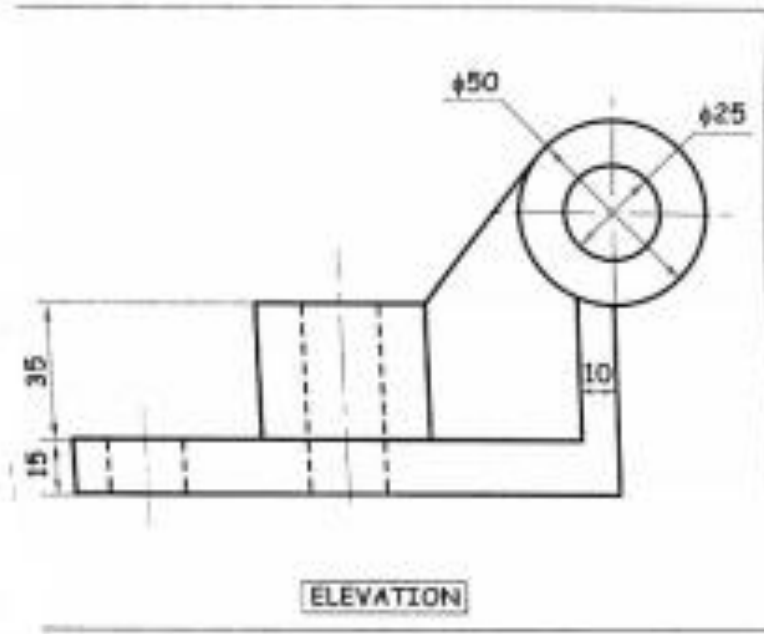
LEFT HAND SIDE VIEW



TOP VIEW

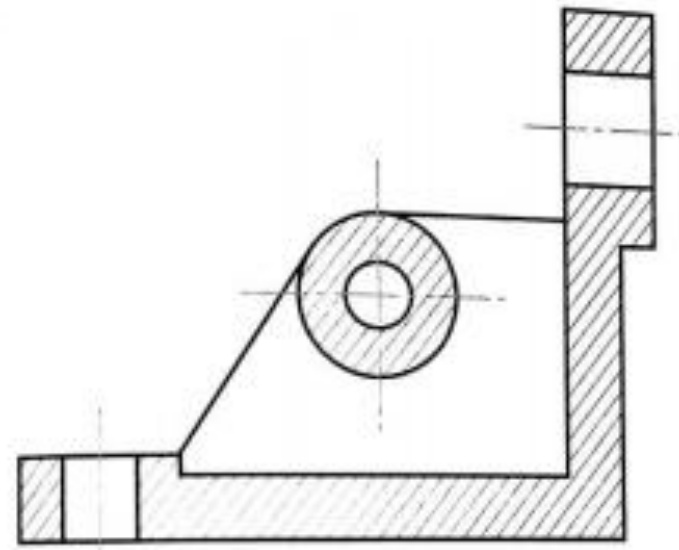
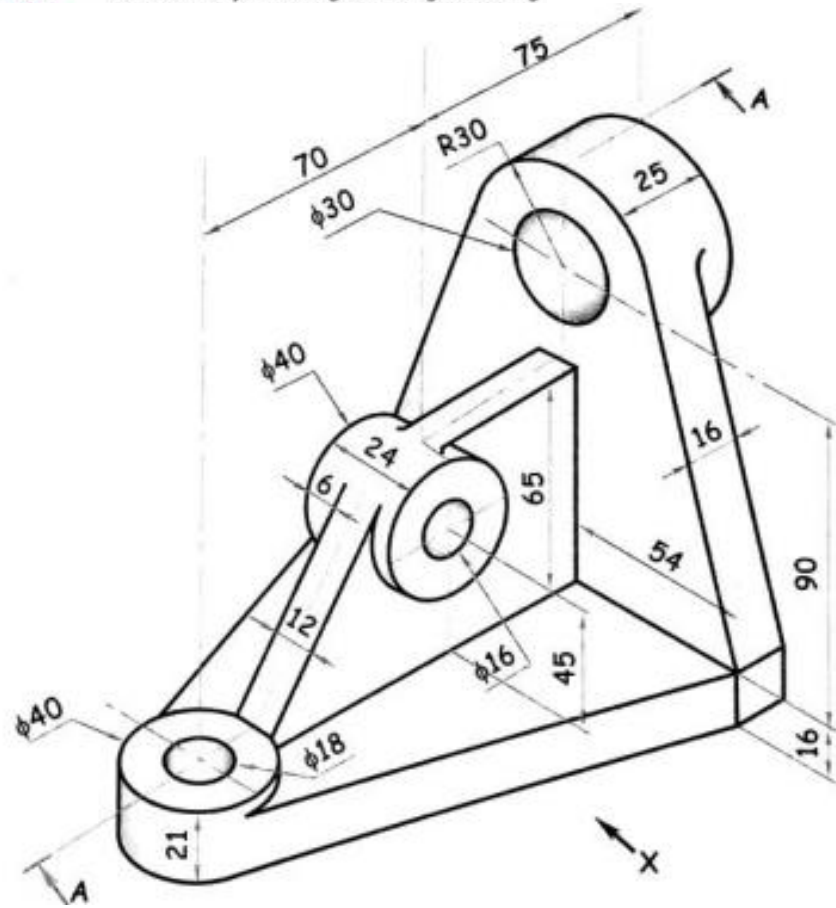


Solution

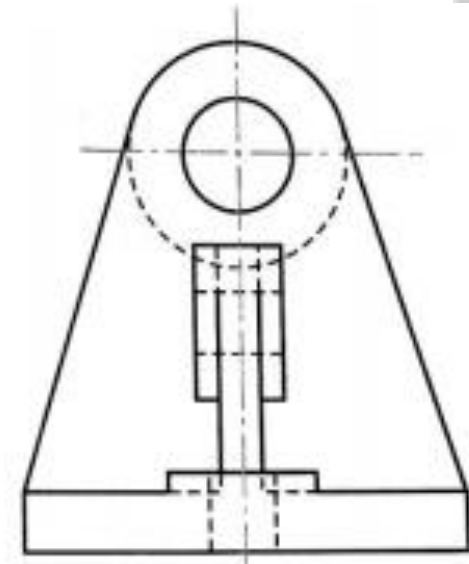


POINTS TO BE NOTED WHILE DRAWING SECTION LINES

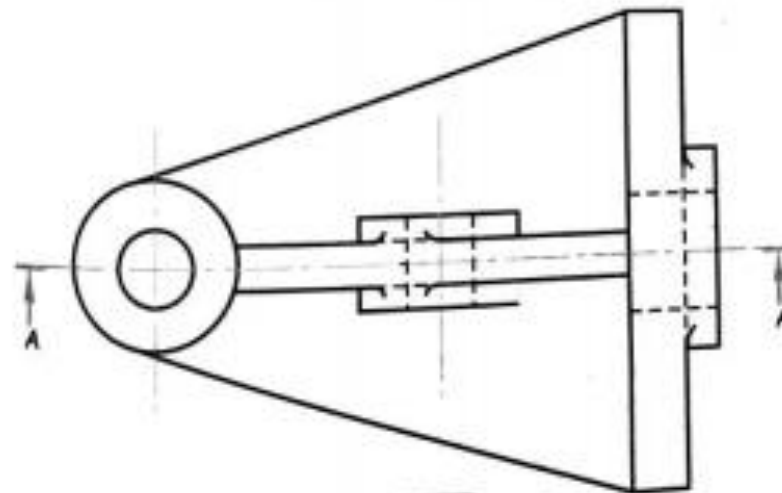
- 1) Visible lines contained in the cutting plane and behind the section are drawn.
- 2) Invisible lines behind the section are usually omitted.
- 3) Only the parts actually cut by section are cross hatched with a continuous thin line at an angle of 45 degree to the major outline of the object.
- 4) The cutting plane line is shown in the view as a chain line with thick edges and arrow indicates the direction of the observer.



SECTIONAL F. V.

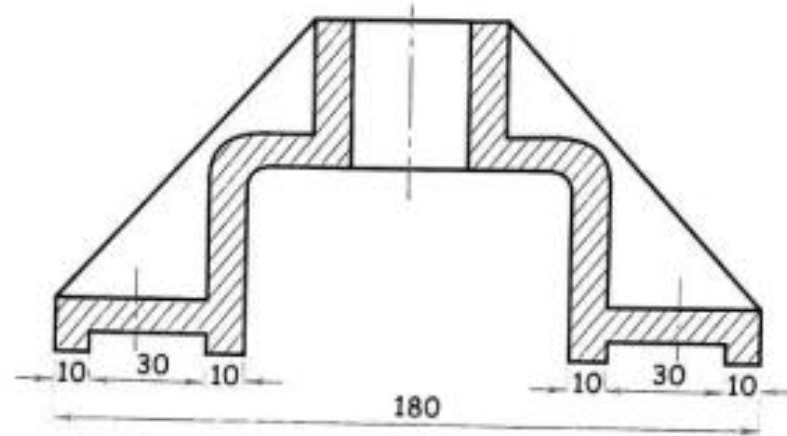
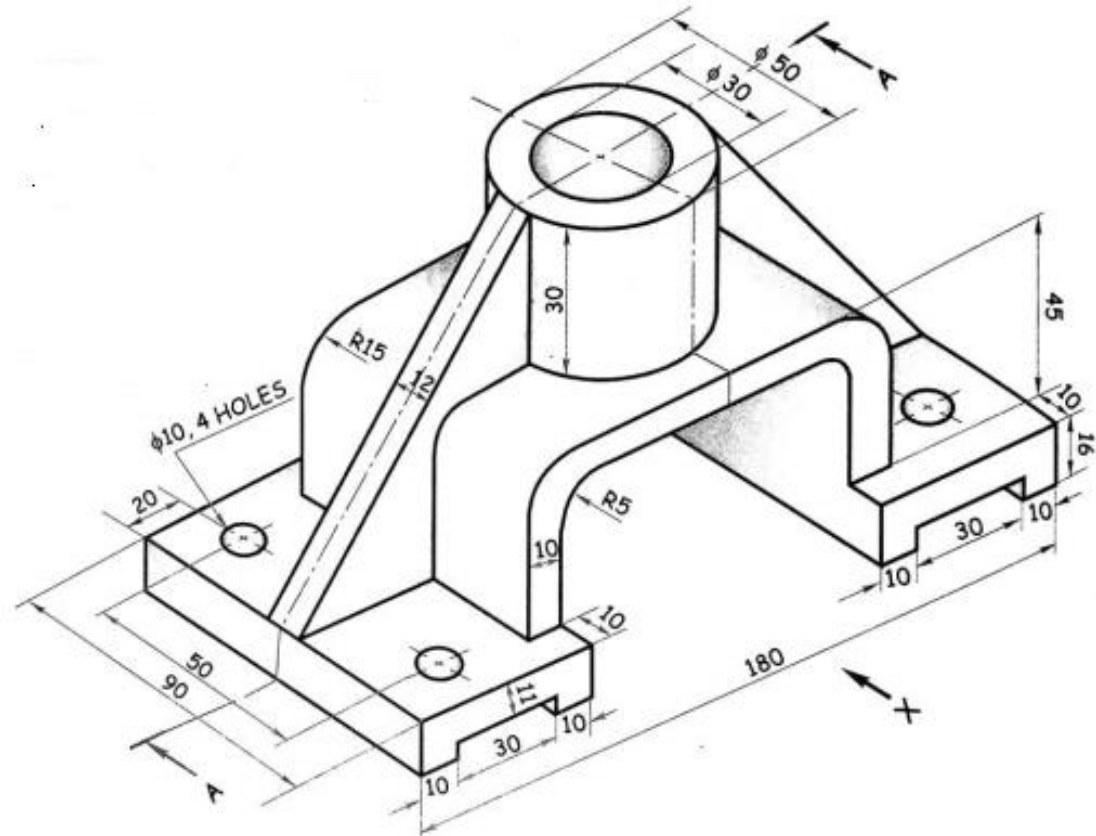


L.H.S.V.

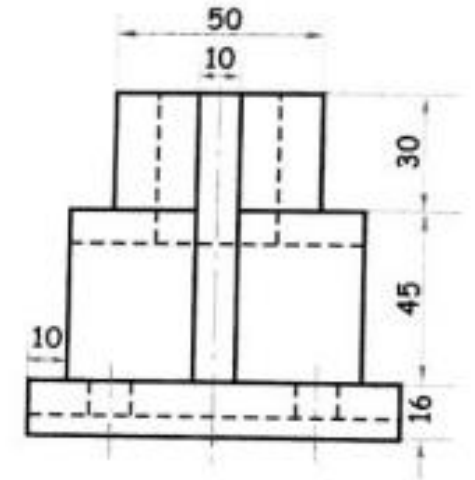


T.V.

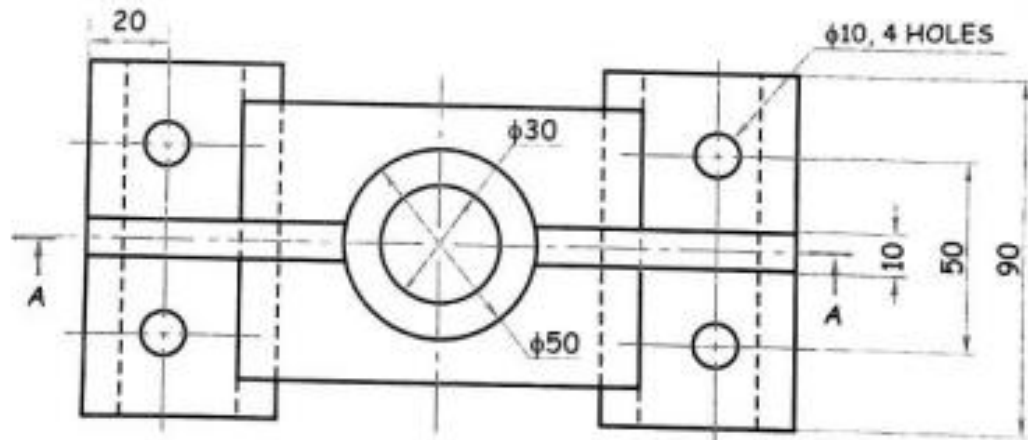
Draw the T.V, Sectional F.V & L.H.S.V



SECTIONAL ELEVATION



END VIEW



PLAN