



Question bank

Note: In this question bank, consists of 4 sections and totally 10 pages with come answers (I. solids, inclined one plane, II. Combined solids, III. Orthographic projections (2D) to Isometric View (3D), Iv. Isometric vied (3D) to Orthographic projections(2D).

Note: Show all the dimensions for Front view, Top View and Side View (2D). And for 3D view

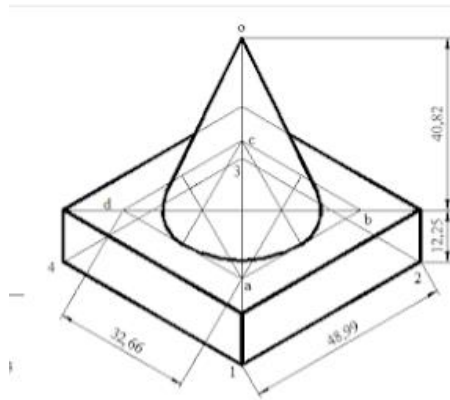
I. Projection of solids inclined to one plane (these are manual problems)

1. A pentagonal Prism having a base with a 30 mm side and 60 mm long axis is resting on one of its rectangular faces on the HP. with an axis parallel to the VP. Draw its projections?
2. A hexagonal Prism having a base with a 30 mm side and 75 mm long axis, has an edge its base on the HP, its axis projections? parallel to the VP and inclined at 45^0 to the HP. Draw its projections.
3. A hexagonal Prism having a base with a 30 mm side and 65 mm long axis, has an edge its base on the VP, and its axis projections? parallel to the HP and inclined at 30^0 to the VP. Draw its projections.
4. A circular cone, 40 mm base diameter, and 60 mm long axis is resting on HP, on one point of a base circle such that its axis makes 45^0 inclination with HP and parallel to VP. Draw its projections.
5. A cylinder 40 mm base diameter and 50 mm long axis is resting on one point of a base circle on HP, while its axis makes 45^0 inclination with HP and is parallel to VP. Draw its projections.
6. A cone of base diameter 50 mm and height 60 mm is resting on the ground on the point of its base circle such that the axis of the cone is inclined at 45° to the H.P. and parallel to the V.P. Draw its projections.
7. A hexagonal Prism having a base with a 40 mm side and 80 mm long axis has an edge its base on the HP. The end containing that edge is inclined at 30^0 to the HP, and the axis is parallel to the VP. Draw its projections.
8. A square pyramid of base side 30 mm and altitude 50 mm lies on one of its triangular faces on the HP with its axis parallel to the VP. Draw its projections.
9. Draw the projections of a hexagonal pyramid of side of base 30mm and axis 60 mm long resting on one of its base edges in HP with its axis inclined at 30^0 to HP and parallel to VP.
10. Draw the projections of a pentagonal prism, base 25 mm side and axis 50 mm long resting on one of its rectangular faces on HP, with the axis inclined at 45 degrees to VP.

II. Combined Solids

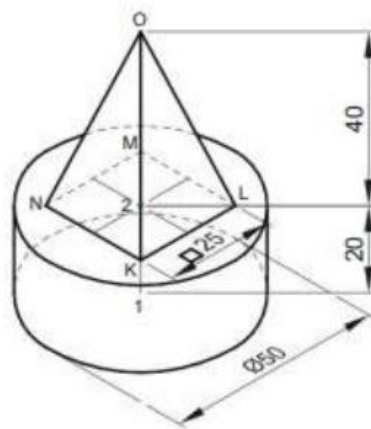
(Note: Draw Isometric projections using Iso left, Iso top, Iso right)

1. A cone of base diameter 40 mm. and axis length 50 mm. is mounted centrally on the top of a square block of side 60 mm. and thickness 15 mm. Draw the isometric projection of the solids.

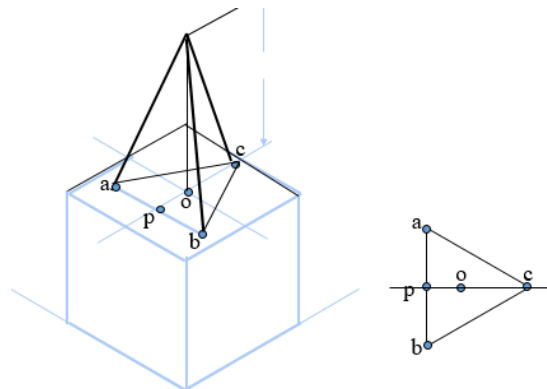


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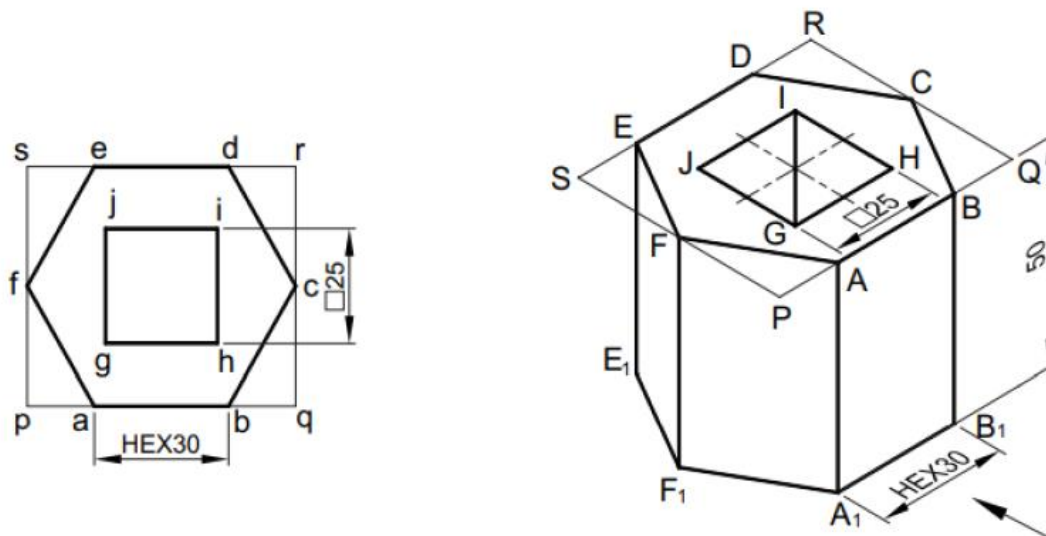
3. A square pyramid with a base side of 25 mm and an axis of 40 mm rests centrally over a cylindrical block with a base diameter of 50 mm and thickness of 20 mm. Draw the isometric projection of the arrangement.



4. A triangular pyramid of 30 mm base sides and a 50 mm long axis is centrally placed on the top of a cube with 50 mm long edges. draw an isometric view of the pair

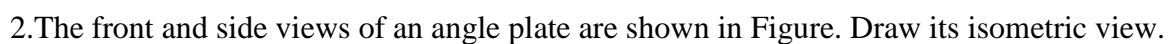


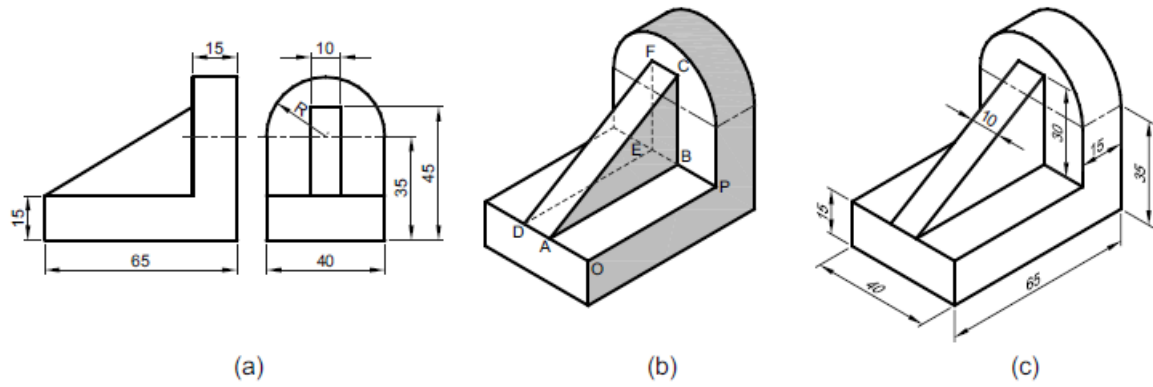
8. A hexagonal prism of a base side of 30 mm and axis of 50 mm has an axially drilled square hole of sides of 25 mm. One of the faces of the square hole is parallel to the face of the hexagon. Draw the isometric projection.



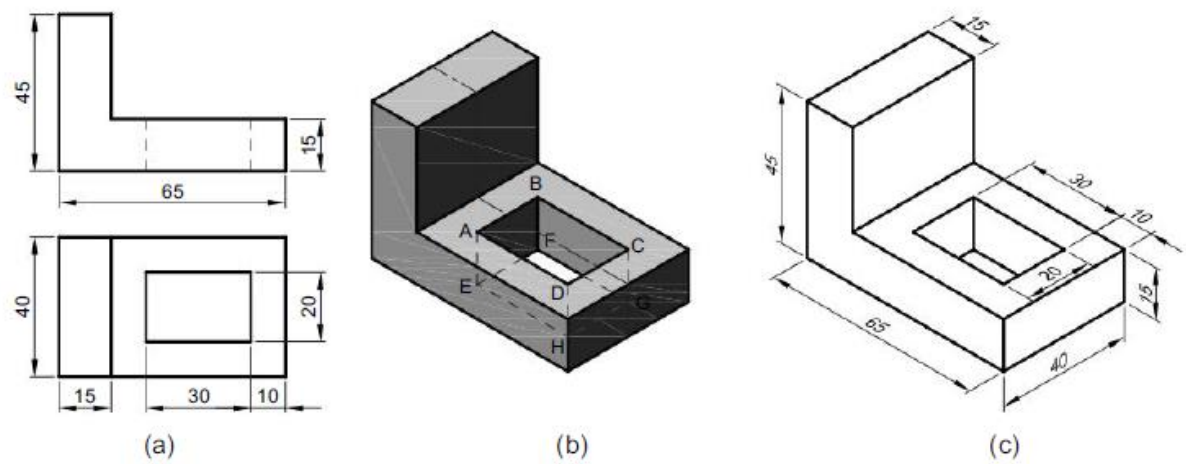
Note: This section is 2D to 3D; keep 3D, you need to publish 3D view with dimensions only

1. The front and top views of an angle plate are shown in Figure. Draw its isometric view.

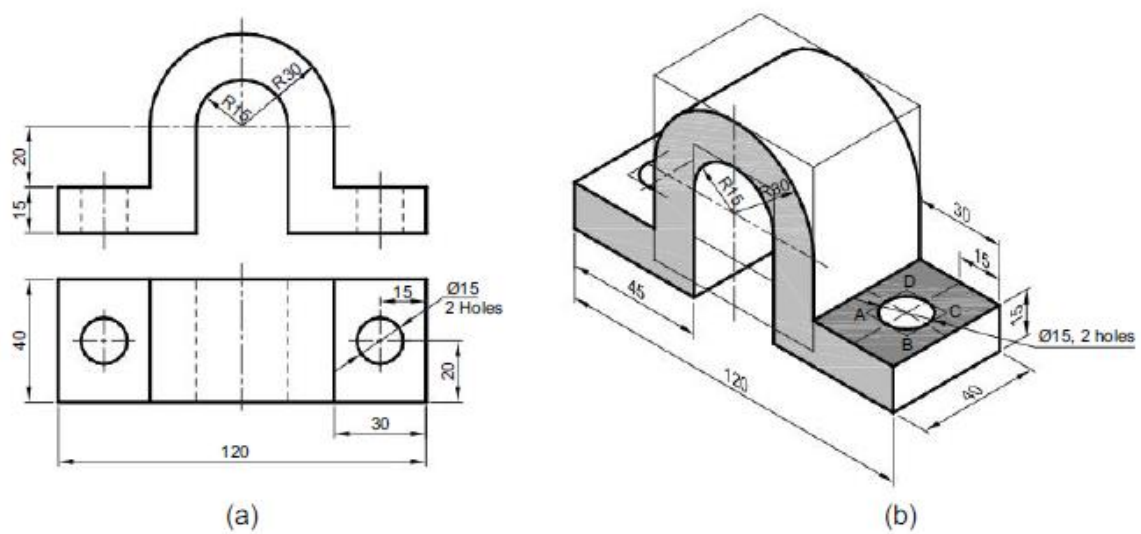




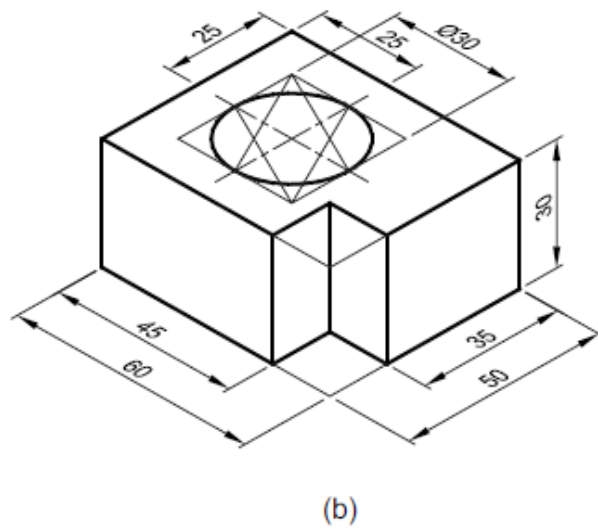
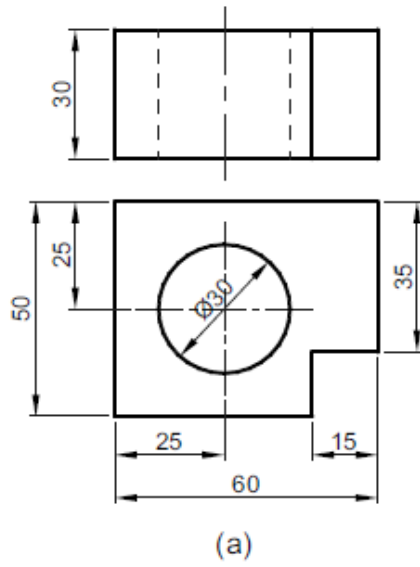
3. The front and top views of an angle plate are shown in Figure. Draw its isometric view.



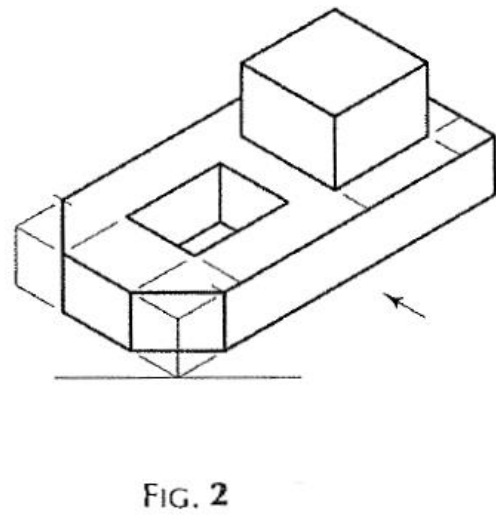
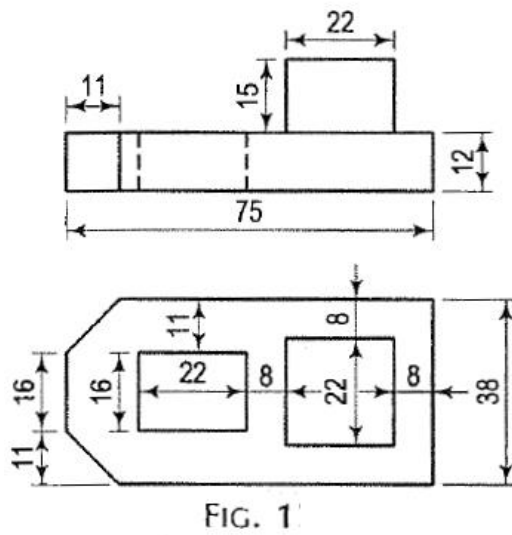
4. The front and top views of a casting are shown in Figure. Draw its isometric view.



5. The front and top views of a casting are shown in Figure. Draw its isometric view.



6. The front and top views of a casting are shown in Figure. Draw its isometric view.



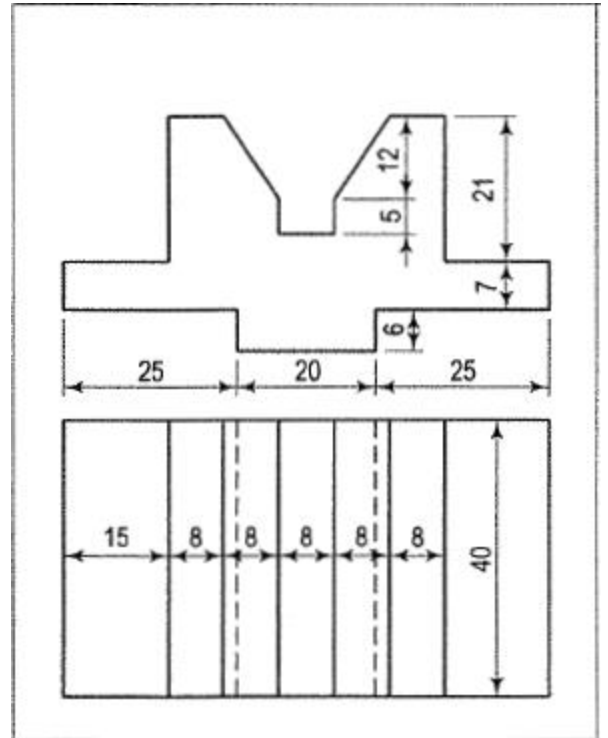
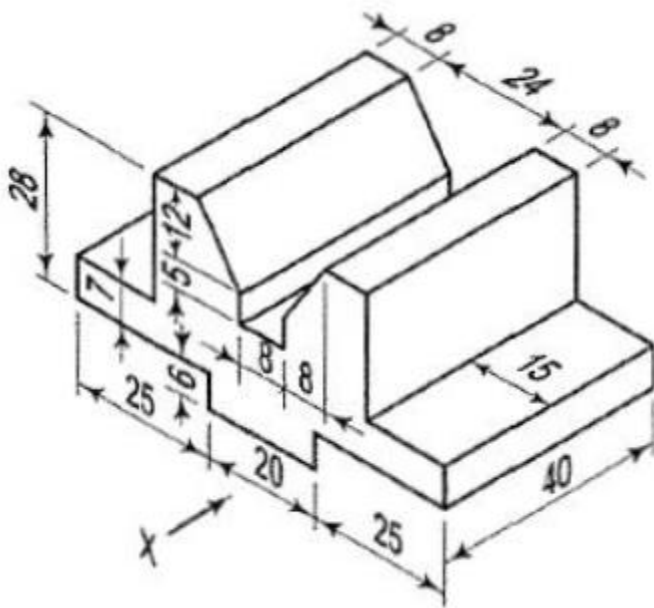
IV. Conversion of isometric view to orthographic projections (3D to 2D)

Note: The arrow mark shows the direction of the FV, TV, and SV. In a layout, you need to publish FV, TV, and SV only not 3D view)

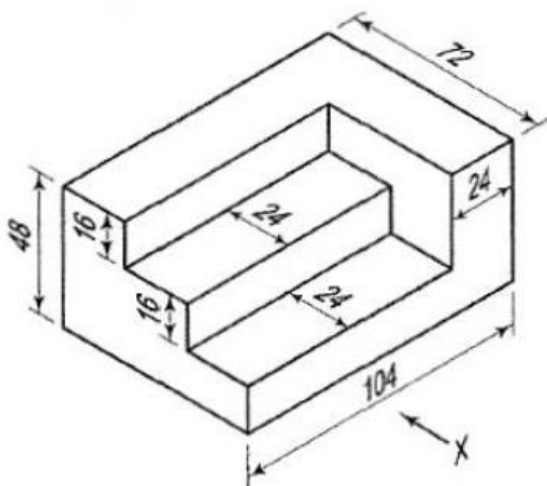
(Note: one view is missing in answers, you need to draw all views in the exam, like F, V, T, V, S.V)

Q. Draw the (i) Front view, (ii) Top View (iii) Side view of the Following Isometric Drawings using AutoCAD

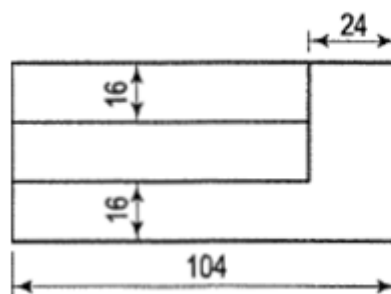
1.



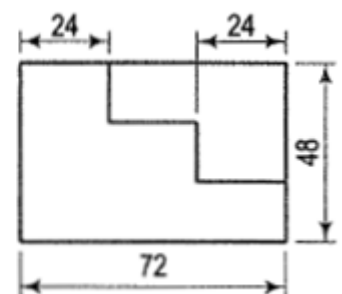
2.



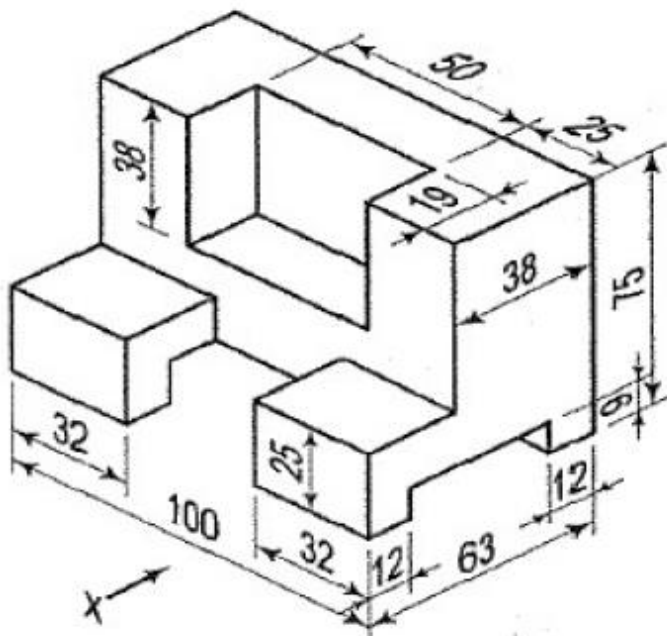
Front View



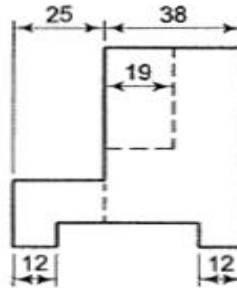
Leftside View



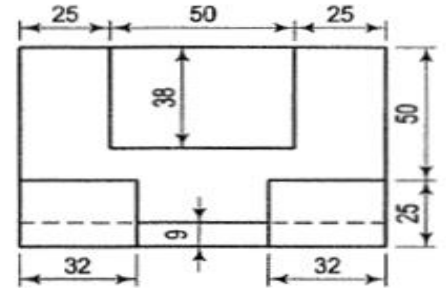
3.



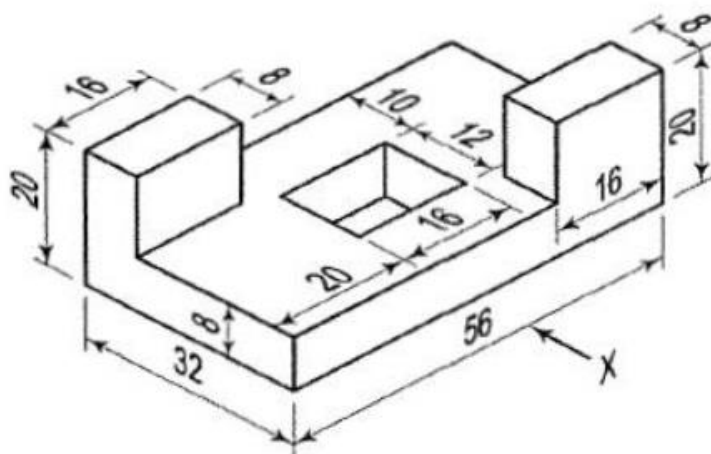
Right side View



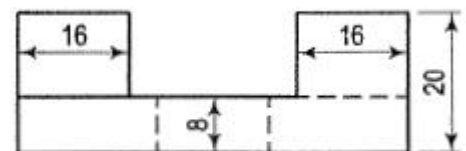
Front View



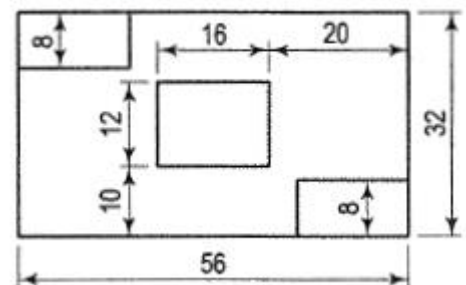
4.



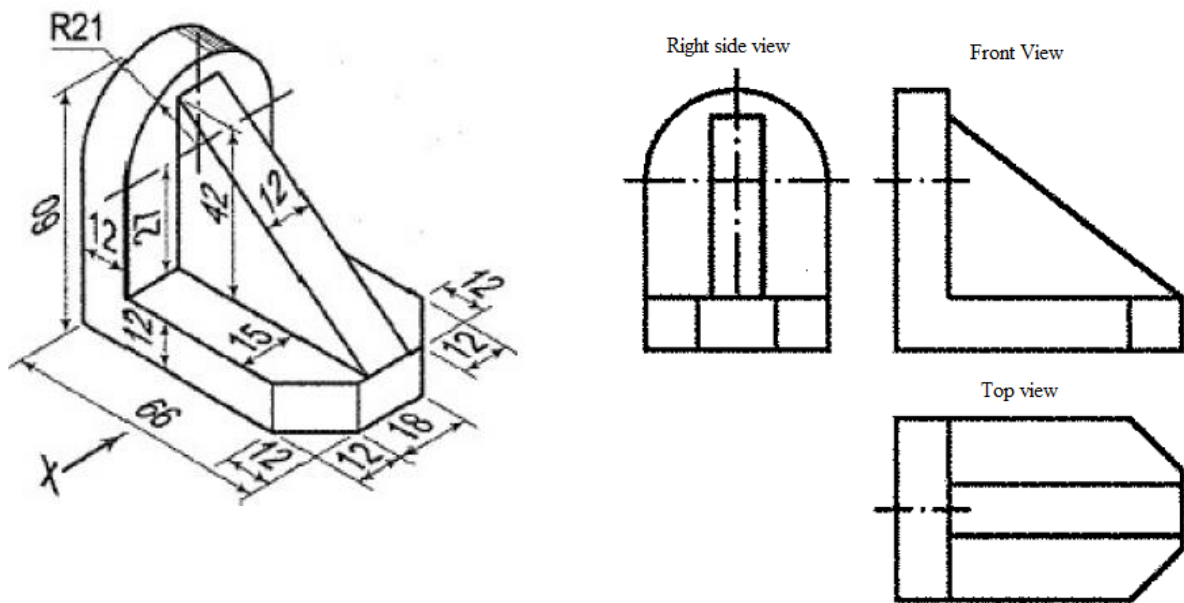
Front view



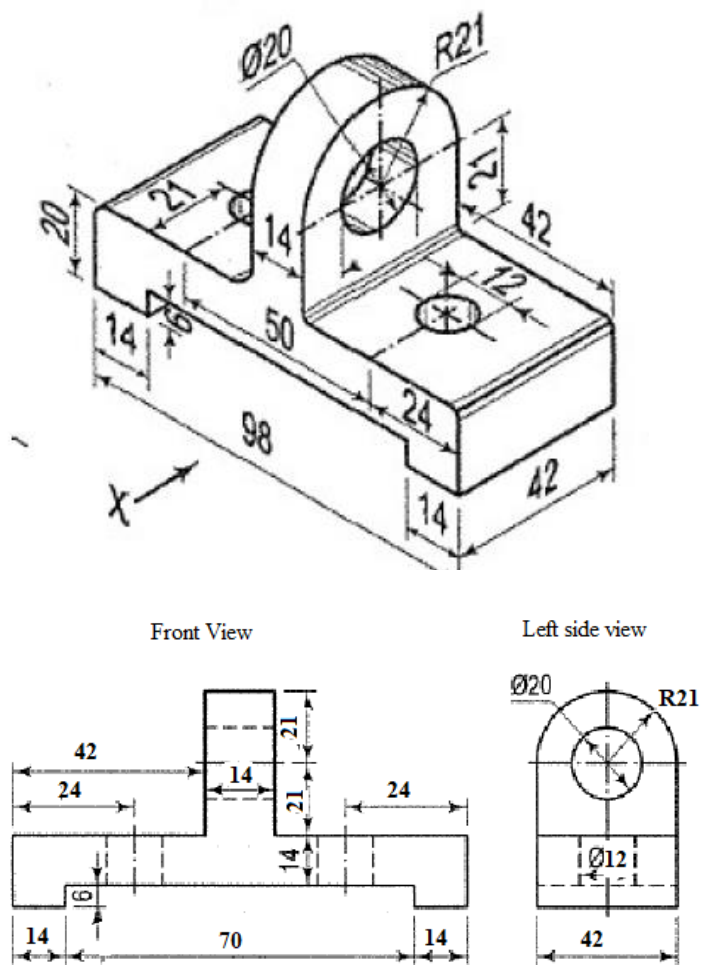
Top View



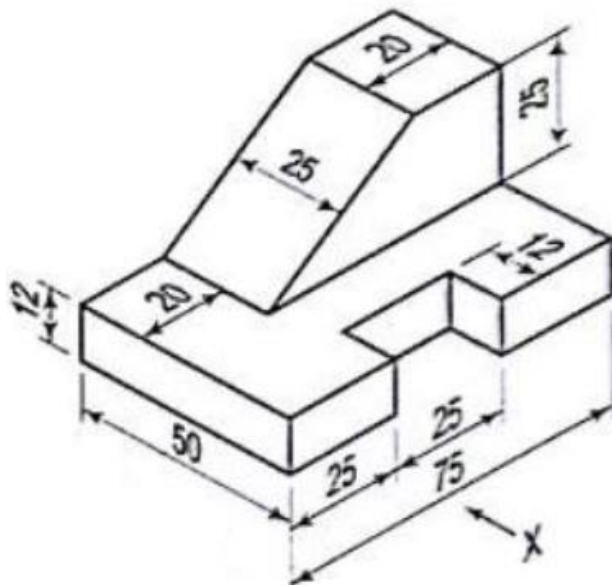
5.



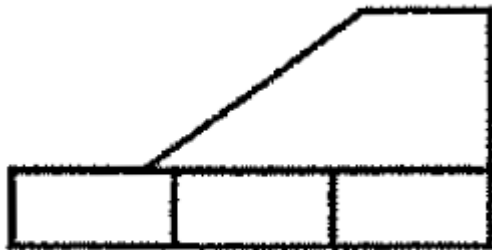
6.



7.



Front View



Left side View



Top view

