Projection of solids - I

[Solid in simple positions when (i) Axis of solid perpendicular to H.P and parallel to V.P, (ii) axis of solid perpendicular to V.P and parallel to H.P, (iii) Axis of the solid parallel to both H.P and V.P]

1. Draw the projections of a triangular prism base 40 mm side and axis 50 mm long resting on one of its bases on H.P. with vertical face perpendicular to the V.P.
2. Draw the projections of pentagonal pyramid base 30 mm edge and axis 50 mm long having its base on H.P. and an edge of the base parallel to the V.P.
3. Draw the projections of a cylinder of base 40 mm diameter and axis 50 mm long resting on H.P on its base.
4. Draw the projections of a cone of base 40 mm diameter and axis 50 mm long resting on H.P on its base.
5. Draw the projections hexagonal pyramid base 30 mm side and axis 60 mm long having its base on H.P. and one of its edges of the base at 45^0 to the V.P.
6. A hexagonal prism has one of its rectangular faces parallel to the H.P. and axis perpendicular to the V.P. Draw its projections when the nearest end 2 cm in front of V.P. Side of the base is 2.5 cm long and axis 5 cm.
7. A square pyramid base 40 mm side and axis 65 mm long has its base in the V.P. One edge of the base is at 30^0 to H.P. and a corner containing that edge is on the H.P. Draw its projections.
8. A cone with a 40 mm base diameter and a 60 mm axis has its base parallel to and 10 mm above the H.P. while its axis is parallel to and 50 mm in front of the V.P. Draw its projections.
9. Draw the projections of a triangular pyramid side of base 25mm and axis 60 mm long is resting on the ground with its axis parallel to both H.P and V.P.
10. A tetrahedron of edge 30 mm long is standing on its base on the ground with one of the base edges parallel to the V.P. Draw the projections of the solid.

Projection of solids - II (Case-1: Axis of the solid inclined to HP and parallel to V.P.)

1. A pentagonal prism, base 25mm side and axis 50mm long is resting on one of its edges in the H.P. The axis of the solid makes 45^0 with H.P. Draw its projections.
2. A triangular prism of base 25 mm side and height 50 mm has its axis inclined at 45^0 to H.P. and has a base edge on H.P. Draw its projections.
3. Draw the projections of hexagonal prism of base 25 mm side and axis 60 mm long when it is resting on one of its corners of the base on H.P. The axis of the solid is inclined at 45^0 to the H.P.
4. Draw the projections of a right circular cone of base 40 mm diameter and axis 60 mm long resting on H.P on a point on its base circle with the axis making an angle of 30^0 with H.P.
5. Draw the projections of the cone, base 75 mm of diameter and axis 100 mm long lying on H.P. on one of its generators with the axis parallel to V.P.
6. A cylinder of diameter 40mm and axis 60 mm long rests on a point in the H.P. If the axis of the cylinder is inclined to H.P. at 30^0, draw its projections.
7. A square pyramid of base 25 mm side and axis 60 mm long lies on a corner on H.P. with its axis inclined to H.P at 45^0 . Draw the projections of the solid.

8. A hexagonal pyramid base 25 mm side and axis 50 mm long has edge of the base on the ground. Its axis inclined at 30^0 to the ground and parallel to V.P. Draw its projections.

Projection of solids - II (Case-2: Axis of the solid inclined to VP and parallel to H.P.)

9. A pentagonal prism, base 25mm side and axis 50mm long is resting on one of its edges in the V.P. The axis of the solid makes 45^0 with V.P. Draw its projections.

10. A cone of base 40 mm diameter and axis 60 mm long lies on a point on its circumference on V.P. with its axis inclined 45^0 V.P. Draw the projections of the cylinder.
11. Draw the projections of the cylinder 75 mm diameter and 100 mm long, lying on the ground with its axis inclined at 30^0 to V.P. and parallel to the ground.
12. Draw the projections of pentagonal prism base 25 mm side and axis 50 mm long resting on one of its rectangular faces on the H.P. with the axis inclined at 45^0 to the V.P.
13. A hexagonal prism side of the base 25 mm and axis 60 mm resting on V.P. one of its edges. The axis inclined at an angle of 45^0 to the V.P. Draw its projections.
14. A hexagonal pyramid side of base 30 mm, axis 60 mm resting on V.P. on one of its base corners. Its axis is inclined to V.P. by an angle of 60^0 and parallel to H.P. Draw its projections.
15. A square pyramid of base 25 mm side and axis 60 mm long lies on a corner on V.P. with its axis inclined 45^0 V.P. Draw the projections of the solid.