

2. (a) The distance between the projectors of two points A and B is 70 mm. Point A is 10 mm above the H.P. and 15 mm in front of the V.P., Point B is 50 mm above the H.P. and 40 mm in front of the V.P. Find the shortest distance between A and B by the rotating line method. Measure the true inclinations of the line AB with the V.P. and the H.P. Also mark the traces.

Or

- (b) A pentagon of 35 mm side is resting on one of its corners on the VP. The edge opposite to that corner makes an angle of 30° to the HP. The surface of the pentagon is inclined at 40° to the VP. Draw the projections.
3. (a) A hexagonal pyramid of base side 30 mm and axis height 65 mm has one of the corners of its base in the VP and the axis is inclined at 45° to the VP and parallel to HP. Draw the front view and top view of the solid.

Or

- (b) Draw the projections of a pentagonal pyramid of base side 25 mm and altitude 60 mm when it rests on the ground on one of its base edges with the axis inclined at 30° to the ground and parallel to the VP. Use change of reference line method.
4. (a) A cone of base diameter 50 mm and height 65 mm is resting on HP on its base. A Section plane cuts the cone in such a way that it is perpendicular HP and 35° inclined to VP. Also the section plane is passing through the cone at a distance of 12 mm in front of the axis. Draw its sectional front view and true shape of the section.

Or

- (b) A cylinder of base 60 mm diameter and height of 75 mm rests with its base on HP. A section plane perpendicular to VP and inclined at 30° to HP bisects the axis of the cylinder. Draw the development of its lateral surface.
5. (a) A pentagonal pyramid base 25 mm and height 65 mm stands with its base on HP and edge of the base parallel to VP and nearer to it. A section plane cuts the pyramid at 30° inclined to HP and passes through a point on the axis at a distance of 20 mm from the apex. Draw the isometric view of the truncated pyramid.

Or

- (b) A hexagonal prism of base side 25 mm and height 50 mm lies with its base on the GP such that one of its rectangular faces is inclined at 30° to the PP and the vertical edge nearer to the PP is 15 mm behind it. The station point is 45 mm in front of the picture plane 70 mm above the GP and lies in the central plane which is 15 mm to the left of the vertical edge nearer to the picture plane. Draw the perspective projection of the prism.