



side opposite to the corner on which it rests is inclined at  $30^\circ$  to the VP and is parallel to HP. The surface of the pentagon makes  $50^\circ$  with the ground. Draw the top and front view of the pentagon for a given position.

3. i) A cone of base diameter 60 mm and height 70 mm is resting on the HP on one of its generators such that its axis is inclined to the HP and parallel to the VP. Draw its projections.

OR

ii) A hexagonal pyramid of base edge 25 mm and height 65 mm is resting on the HP on its base with two of the base edges parallel to VP. One of the base edge 20 mm nearer to the VP. A section plane perpendicular to the HP and  $30^\circ$  inclined to the VP cuts the pyramid. Also section plane passing through the pyramid at a distance of 10 mm in front of the axis. Draw its sectional view and true shape of the section.

4. i) A hexagonal pyramid of base side 25 mm and height 50 mm is resting vertically on its base on the ground with two of the sides of the base perpendicular to the VP. It is cut by a plane perpendicular to the VP and inclined at  $40^\circ$  to the HP. The section plane bisects the axis of the pyramid. Draw the development of the lateral surfaces of the pyramid.

OR

ii) A horizontal cylinder of diameter 40 mm and height 100 mm penetrates into a vertical cylinder of diameter 60 mm and height 80 mm. the axes of the cylinders bisect each other at right angles. The axis of the horizontal cylinder is parallel to the VP and HP. Draw the intersection of solids.

5. i) draw the isometric view of a cylinder of diameter 46 mm and height 60 mm when it is resting on one of its ends on the HP. It is cut by a plane perpendicular to the VP and inclined at  $45^\circ$  to the HP. The plane passes through a point on the axis located at 15 mm from the top.

OR

ii) A cube of side 45 mm rests on the ground on its base with all the vertical faces equally inclined to the picture plane. One vertical edge is touching the picture plane and 15 mm to the left of the station point which is 70 mm above the ground and 55 mm in front of the picture plane. Draw the perspective view of a cube.