

3. (a) Draw the projections of a hexagonal pyramid, 25 mm side, axis 60 mm long, when it is resting on one of its base edges with the axis making an angle of 45° with HP and its top view making 30° with the xy -line.

Or

- (b) A pentagonal pyramid with edge of base 25 mm and axis 65 mm long is resting on the HP on its base, with an edge of it parallel to VP. It is cut by a section plane, inclined at 60° to the VP and at a distance 5 mm from the axis. Draw the sectional view from the front and the true shape of the section.
4. (a) A cone of 60 mm base diameter has a height of 80 mm. A hole 30 mm diameter is made through the cone. The centre of hole is 20 mm above the base and lies on the elevation of the cone axis. Draw the development of the cone and show the development of hole on it.

Or

- (b) A hexagonal prism of base side 20 mm and height 50 mm is resting on one of its base on the HP, with two of its lateral faces parallel to the VP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The plane meets the axis at a distance of 20 mm above the base, Draw the development of the lateral surfaces of the lower portion of the prism.
5. (a) A hexagonal pyramid of 30 mm edge of base and height 65 mm rests with a base edge parallel to VP, on HP and the apex point is nearer to V.P. Draw the isometric projection of the pyramid.

Or

- (b) A cube with 30 mm edges is lying on one of its faces on the ground with a vertical edge touching the picture plane. The two vertical faces containing that vertical edge touching the picture plane is equally inclined at 45° to the picture plane. The station point is 70 mm above the ground and 50 mm in front of the picture plane. The central plane is 10 mm to the left of the centre of the cube. Draw the perspective projection of the cube.