



3. a) A hexagonal pyramid of base side 25 mm and axis 60 mm long is resting on an edge of the base on H.P. Draw the projections of the solid, when the axis makes an angle  $45^\circ$  with V.P. and the base of the solid is nearer to V.P.

(OR)

- b) Draw the projections of a cube of edge 30 mm resting on the ground on one of its corners with a solid diagonal perpendicular to V.P.
4. a) A pentagonal prism, side of base 30 mm and axis 60 mm long lies with one of its rectangular faces on H.P. and its axis is inclined at  $30^\circ$  to V.P. A section plane perpendicular to H.P. and parallel to V.P. cuts the prism into two halves. Obtain its top and sectional front views.

(OR)

- b) Draw the development of the surfaces of a cylinder 50 mm diameter and 60 mm height. The cylinder contains a square hole of 20 mm side. The sides of the hole are equally inclined to the base and axis of the hole bisects the axis of the cylinder.
5. a) Draw the perspective projection of a cube of 40 mm sides lying on one of its square faces on the ground and another square face on the picture plane. The station point is 45 mm in front of the picture plane, 50 mm above the ground and lies in a plane which is 65 mm to the right of the axes of the cube. Draw only the visible edges of the cube.

(OR)

- b) A hemisphere of 50 mm diameter rests centrally with its flat surface at the top, over a frustum of a cone of 80 mm base diameter, 60 mm top diameter and 50 mm height. Draw isometric projection of the arrangement.

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