1. A pentagonal pyramid, with edge of base 30 mm and 65 mm height stands on HP such that an edge of the base is parallel to VP. It is cut by a plane perpendicular to VP and inclined at 30° to HP cuts the pyramid passing through a point on the axis at a height to 35 mm from the base. Draw the isometric view of the truncated pyramid showing the cut surface.  

(Ans:)

UNIT V-ISOMETRIC PROJECTION AND PERSPECTIVE VIEW
2. A cylinder, with diameter of base 35 mm and axis 55 mm long, is resting on its base on HP. A section plane, perpendicular to VP and inclined at 45° to HP passes through the axis at a distance of 15 mm from its top end. Draw the isometric projection of the truncated cylinder. (MAY-2008) (MAY-2011) (JUN-2011) (Jan-2014).

Ans:
3. An object consists of a hemispherical vessel of 60 mm diameter which is placed centrally over a truncated cone of 50 mm bottom base diameter, 40 mm top face diameter and height of 50 mm. The cylinder in turn is placed centrally over a square prism of 60 mm base side and 20 mm height. Draw the isometric projection of the object.
Ans:
4. A hexagonal prism of base side 30 mm and height 65 mm has square hole side 20 mm at the centre. The axes of square and hexagonal coincide. One of the faces of the square hole is parallel to the face of hexagon. Draw the isometric projection of the prism with hole to full scale. (MAY-2009) (JAN-2010)

Ans:
5. A hemisphere of 90 mm in diameter is centrally joined to the end of a cylinder of 60 mm in diameter. The height of the cylinder is 90 mm. Draw the isometric projection of this combination when the hemisphere is on the top. (JAN-2010)

Ans:
6. A cone of diameter 50 mm base and height 40 mm rests centrally on top of a square block of 80 mm side and 20 mm thick. Draw the isometric projection of the two solids. (MAY-2010)

Ans:
7. A hexagonal prism side of base 25 mm and height 50 mm rests on HP and one of the edges of its base is parallel to VP. A section plane perpendicular to VP and inclined at 50° to HP bisects the axis of the prism. Draw the isometric projection of the truncated prism. (JAN-2011)

8. Draw the isometric projection of frustum of a cone of base diameter 60 mm and top base diameter 40 mm and axis 60 mm rests on HP on its base. (JAN-2011)
Ans:
9. A square pyramid of base 30 mm side and 50 mm height rests on the ground with a base edge parallel to VP. It is cut by a plane perpendicular to VP, 25 mm from the base and inclined at $35^\circ$ to HP and bisects the axis. Draw the isometric view of the truncated solid. (JUN-2011, JAN-2011)

Ans:
10. A cone diameter of base 40 mm and height 50 mm rests with its base on HP. A cutting plane perpendicular to VP and inclined to 45° to HP cuts the cone such that it passes through a point on the axis at a distance of 25 mm above the base of the cone. Draw the isometric projection of the truncated cone showing the cut surface. (JAN-2012)

Ans:
11. Draw the perspective view of pentagonal prism of base side 20 mm and height 40 mm when it rests on the ground plane with one of its rectangular faces parallel to and 20 mm behind the picture plane. The station point is 45 mm in front of the PP and 60 mm above the GP. The observer is 30 mm to the left of the axis. Draw the perspective by visual ray method. Use the top view and front view. (Jan-2014)

Ans:
12. A rectangular lamina of size 30 mm X 50 mm rests on the ground with one edge on PP and remaining portion behind PP. The station point is 60 mm above GP and 30 mm in front of PP and lies on a central plane 35 mm to the left of the nearest edge of lamina. Draw the perspective view of the lamina. (Jan-2013)

Ans:
13. A hexagonal prism side of base 25 mm and height 50 mm has one of its rectangular faces inclined at 30° to picture plane and the vertical edge nearer to PP is 15 mm behind it. The station point is 45 mm in front of picture plane, 70 mm above the ground plane and lies in a 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. (Jan-2010)
14. A square prism 30 x 30 x 60 mm rests with the rectangular face on the ground. The nearest corner is 10 mm to the left of the central plane and 20 mm behind picture plane. Long edge of the prism is inclined at 45° to the picture plane and the prism vanishes to the left. The station point is 75 mm above the ground and 65 mm from the picture plane. Draw the perspective projection. (Jan-2010)
15. A rectangular pyramid, base 30 mm x 20 mm x and axis 35 mm long, is placed on the ground plane on its base, with the longer edge of the base parallel to and 30 mm behind the PP. The CP is 30 mm to the left of the apex and station point is 50 mm in front of the PP and 25 mm above the GP. Draw the perspective view of the pyramid. (Jan-12)
Ans: 

[Diagram with labeled points and distances: GP, PP, HL, e, e', o, o', a, b, c, d, 30, 20, 50, 30, 25, 35, (a'), (b'), (c'), (d')]