ME119 Engineering Drawing, March 2022
Lab 5

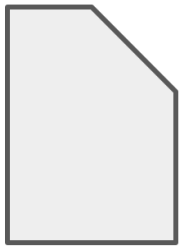
Do not draw dimensioning lines or write dimensions

Q1. A rectangular pyramid with base measuring 30 mm x 50 mm and the axis 50 mm long, is resting on its base with the shorter edge of base parallel to VP. It is cut by a section plane perpendicular to VP, inclined at 45 degree to HP and passing through a point on the axis 20 mm from apex. Draw the front view, sectional top view and the true shape of the section of the pyramid.

Q2. A pentagonal pyramid with 30 mm edges at base and 65 mm axis, rests on its base so that one of the edges of its base is at 30 degrees to VP and is parallel to HP. It is cut by a sectional plane inclined at 45 degrees to HP and perpendicular to VP. Draw FV, sectional TV and true shape of section if the cutting plane bisects the axis.

Q3. A hollow cylinder has 50mm internal diameter, 80 mm outer diameter and 80 mm as the length of the axis. It has its axis parallel to VP and at 30 degrees to HP. It is cut by a plane at 45 degrees to the upper surface of the cylinder such that the circular surface is divided in half and the other half is removed. Draw its projections.

Hint- Reference shape:



Q4. A tetrahedron of 50 mm long edges is resting on one of its faces with an edge of that face perpendicular to VP. The cutting plane perpendicular to VP and inclined to HP cuts the solid such that the true shape of the section is:

1: An isosceles triangle of 30 mm base and 35 mm altitude
2: A trapezium of parallel side lengths equal to 24 and 40 mm

Draw the FV, sectional view, and true shape of section in each case.