

Agnihotri Engineering & GATE Classes

Scripting success stories

SECTION OF SOLID

Q.1) A hexagonal pyramid having side 30 mm & axis 70 mm long resting on its base on HP with an edge parallel to VP.

a) Draw its front view & sectional top view ,If it is cut by a section plane parallel to HP & 30 mm above the base.

b) Draw its front view , sectional top view & true shape of the section, If it is cut by a section plane perpendicular to VP & inclined at 45° to HP.

c) Draw its top view & sectional front view , If it is cut by a vertical section plane parallel to VP & 12mm away from the top view of the axis.

d) Draw its Top view , sectional front view & true shape of the section, If it is cut by vertical section plane the HT of which makes an angle of 45° with X-Y & 12 mm away from the top view of the axis.

Q.2) A square pyramid having side 40 mm & axis 65 mm long resting on its base on HP & all the edges of the base are equally inclined to VP. It is cut by a section plane perpendicular to VP & inclined at 45° to HP & bisecting the axis. Draw its front view,sectional top view ,side view & true shape of the section?

Q.3) A hexagonal pyramid having side 30 mm and axis 65mm long resting on its base on HP with an edge parallel to VP. It is cut by a section plane perpendicular to VP and inclined at 45° to HP and intersecting the axis at a point 25mm above the base. Draw its FV, Sectional top view , Sectional side view & true shape of the section ?

Q.4) A cone diameter of base 60 mm and axis 70 mm long resting on its base on HP .It is cut by section plane perpendicular to VP and inclined at 75° to HP and passing through the apex of the cone , Draw its front view , sectional top view and true shape of the section?

Q.5) A cone diameter of base 60 mm and axis 70 mm long resting on its base on HP .It is cut by a section plane perpendicular to VP and parallel to one of the end generator and 15 mm away from it. Draw its front view ,sectional top view and true shape of the section?

Q.6) A cone diameter of base 60 mm and axis 70 mm long resting on its base on HP. It is cut by an AIP so that the true shape of the section is an isosceles triangle having base 50 mm. Draw the plan , the elevation and true shape of the section ?

Q.7) A right circular cone having diameter 60 mm and axis 70 mm long resting on its base on HP. It is cut by a section plane perpendicular to VP, inclined at 45° to HP and intersecting the axis 30 mm away from the apex. Draw its front view , Sectional top view , Side view and true shape of the section?

Q.8) A vertical cylinder having diameter 50 mm and axis 60 mm long resting on its base on HP. It is cut by a section plane perpendicular to VP and inclined at 45° to HP and intersecting the axis 30 mm above the base . Draw its FV, Sectional Top view, Side view and true shape of the section?

Q.9) A cylinder 50 mm diameter and axis 60 mm long , is resting on the ground. It is cut by a sectional plane perpendicular to VP , the VT of which cuts the axis at a point 40 mm from the base and makes an angle of 45° with HP. Draw its front view , sectional top view and another top view on AIP parallel to the section plane?

Q.10) A cylinder 55 mm diameter and 65 mm long , has its axis parallel to both HP and VP. It is cut by a sectional plane inclined at 30° to VP , so that the axis is cut at a point 30 mm from one of its ends and both the bases of the cylinder are partially cut. Draw its sectional front view and true shape of the section?

Q.11) A square prism having side 40 mm and axis 80 mm long resting on its base on HP and the vertical faces of the square are equally inclined to VP. It is cut by a section parallel to VP and 6 mm away from the top view of the axis. Draw its top view and sectional front view?

Q.12) A square prism having side 40 mm and axis 80 mm long resting on its base on HP. It is cut by a section plane perpendicular to VP , inclined at 60° to HP and intersecting the axis 55 mm above the base. Draw its front view and sectional top view. Project another top view on AIP parallel to the section plane?

Q.13) A square prism axis 110 mm long resting on its base on HP. The edge of the base are equally inclined to VP. The prism is cut by an AIP passing through the mid point of the axis in such a way that true shape of the section is a rhombus having diagonal 100 mm and 50 mm long. Draw the projections and determine the inclination of AIP with the HP .

Q.14) A cube of 50 mm long edge has its vertical faces equally inclined to VP. It is cut by a section plane perpendicular to VP so that the true shape of the section is a regular hexagon. Determine the inclination of the cutting plane with HP. Draw the sectional top view and true shape of the section ?

Q.15) A tetrahedron of 65 mm long edges is lying on the HP on one of its faces, with an edge perpendicular to VP so that the true shape of the section is an isosceles triangle of base 50 mm long and altitude 40 mm. Find the inclination of the section plane with HP and draw the front view , sectional top view and true shape of the section?

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