

# **Agnihotri Engineering & GATE Classes**

Scripting success stories

## **PROJECTION OF SOLID**

### **Stage ( I ) ( Generally asked in the exam)**

**Q.1) A square prism having side 40 mm & axis 65mm long resting on an edge of its base on HP & inclined at 30° to VP . Its axis is inclined at 45° to HP. Draw its projection?**

**Q.2) A pentagonal pyramid, base 25 mm side & axis 50 mm long has one of its triangular face in the VP & edge of the base contained by that face makes an angle of 30° with the HP. Draw its projection ?**

**Q.3) A Pentagonal pyramid having side 30 mm & axis 65 mm long lying on HP , one of its triangular face is in the HP with its axis parallel to VP & edge of the base contained by that face makes an angle of 30° with the VP. Draw its projection ?**

**Q.4) A cube having side 40 mm resting on one of its corner of its base is in the HP. Its base is inclined at 45° to HP while the vertical faces of the cube remain parallel to VP. Draw its three views ?**

**Q.5 A triangular prism having side 40 mm & axis 65mm long resting on HP . One of its rectangular face with its axis parallel to both HP & VP. Draw its three views?**

**Q.6 A pentagonal prism base 30 mm side & axis 65mm long resting on one of its rectangular face is in the HP with its axis inclined at 45° to VP & parallel to HP. Draw its projection?**

**Q.7) A tetrahedron of 75 mm long edge has one edge parallel to HP & inclined at 45° to VP, While a face containing that edge is vertical,. Draw its projection ?**

**Q.8) A hexagonal prism , base 30 mm side & axis 75 mm long, has an edge of the base parallel to the HP & inclined at 45° to VP. Its axis makes an angle of 60° with the HP. Draw its projection ?**

**Q.9) A square pyramid , base 40 mm side & axis 90 mm long , has a triangular face on the ground & the vertical plane containing the axis makes an angle of 45° with the VP. Draw its projection?**

**Q.10 )A hexagonal pyramid having side 30 mm & axis 70 mm long ,resting on HP on one of its triangular face in the HP with its axis parallel to VP & the top view of axis makes an angle of 30° with VP. Draw its projection ?**

**Q.11) A hexagonal pyramid having side 30 mm & axis 70 mm long resting on an edge of its base in the HP & inclined at 45° to VP. Its axis is inclined at 30° to HP. Draw its projection?**

**Q.12) A hexagonal pyramid, base 25 mm side & axis 55 mm long, has one of its slant edge on the ground. A plane containing that edge & axis is perpendicular to HP & inclined at 45° to VP . Draw its projection when the apex is nearer the VP than the base ?**

**Q.13) Draw the projection of a cone, base 60 mm diameter & axis 70 mm long, resting on one of its generator is in the HP, With its axis parallel to VP. Draw its projection when the top view of the axis makes an angle of  $30^\circ$  with the VP , taking the apex nearest to VP .**

**Q.14) Draw the projection of a cone, base 50 mm diameter & axis 75 mm long, lying on a generator on the ground, With the top view of the axis making an angle of  $45^\circ$  with the VP.**

**Q.15 A cylinder having diameter 60 mm & axis 70 mm long lying on the ground with its axis inclined at  $30^\circ$  to VP & parallel to the ground. Draw its projections?**

## **Stage ( II )Miscellaneous problems on auxiliary plane**

**Q.16) A square pyramid base, 38 mm side & axis 50 mm long, is freely suspended from one of the corner of its base. Draw its projections, when the axis as a vertical plane makes an angle of  $45^\circ$  with VP. When a pyramid is suspended freely from a corner of its base , the imaginary line joining that corner with the center of gravity of pyramid will be vertical.**

**Q.17) A square pyramid of 50 mm side & 60 mm axis is resting on one of its triangular face on the HP having a short edge containing that face parallel to VP. Draw the projection of pyramid using auxiliary plane method?**

**Q.18 ) A square prism, with the side of its base 40 mm & axis 70 mm long is lying on one of its base edge on the HP in such a way that this edge makes an angle of  $45^\circ$  with the VP & the axis is inclined at  $30^\circ$  to HP. Draw the projection of the solid using auxiliary plane method .**

Classes on (ED,BEEE,M1,M2,M3,NA,CONTROL,DSP & other GATE oriented Engineering Subjects)

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