

# **Agnihotri Engineering & GATE Classes**

Scripting success stories

## **PROJECTION OF PLANES**

### **Stage-( I )**

- Q.1) An equilateral triangle ABC having side 50 mm has its plane parallel to HP & perpendicular to VP. Draw its projection & show its traces also?
- Q.2) A rectangular plate ABCD having side 30 mm × 50 mm has its plane parallel to VP & perpendicular to HP. Draw its projection & show its traces also?
- Q.3) An equilateral triangle ABC having side 50 mm has one of its side is in the HP , its plane is inclined at 45° to HP & perpendicular to VP. Draw its projection & show its traces also?
- Q.4) A square ABCD having side 50 mm resting on one of its corner is in the HP. Its plane is inclined at 30° HP & perpendicular to VP. Draw its projection & show its traces also?
- Q.5) A regular Hexagon having side 40 mm resting on one of its corner is in the HP. Its plane is inclined at 30° to HP & perpendicular to VP. Draw its projection & show its traces also?
- Q.6) Draw the projection of a circle of 5cm diameter ,having its plane vertical & inclined at 30° to VP . Its center is 3 cm above the HP & 2cm in front VP . Also show its traces?
- Q.7) A pentagonal plate of 45 mm side has a circular hole of 40 mm diameter in its center . The plane stands on one of its side on the HP with its plane perpendicular to VP & inclined at 45° to HP ? Draw its projection & show its traces also?
- Q.8) Draw the regular hexagon of 40 mm side & with its two sides vertical. Draw a circle of 40 mm diameter in its center.The figure represents a hexagonal plate with a hole in it & having its surface parallel to the VP. Draw its projection when the surface is vertical & inclined at 30° to the VP.Assume that thickness of plate is equal to that of line.

### **Stage ( II )**

- Q.9) An equilateral triangle ABC having side 50 mm has one of its side is in the HP & inclined at 60° to VP. Its plane is inclined at 45° to HP & perpendicular to VP ?
- Q.10) A 30°- 60° set square having longest side 80 mm is so kept that longest side is in the HP inclined at 30° to the VP, Its surface is inclined at 45° to HP. Draw its projection ?
- Q.11) A regular hexagon having side 30 mm with one of its side is in the HP & inclined at 60° to VP , its surface is inclined at 45° to HP & perpendicular to VP . Draw its projection?
- Q.12) A regular Hexagon having side 30 mm has a corner is in the HP, its surface is inclined at 45° to HP & the top view of diagonal through which the corner is in the HP makes an angle of 60° with the VP. Draw its projection?
- Q.13) A regular pentagon having side 30 mm has one of its side is in the HP & inclined at 60° to VP. Its plane makes an angle of 45° with HP. Draw its projection ?

- Q.14) Draw the projection of a pentagonal plane having side 30 mm resting on HP with one of its edge in it. The surface is inclined at  $45^\circ$  to HP & perpendicular from mid-point of resting edge makes an angle of  $30^\circ$  with VP.**
- Q.15) Draw the projection of an equilateral triangle ABC having side 30 mm & one of its side is in the VP & inclined at an angle of  $60^\circ$  HP. Its plane makes an angle of  $45^\circ$  with VP.**
- Q.16) A square ABCD having side 50 mm has its corner A is in the HP , Its diagonal AC is inclined at  $30^\circ$  to HP & the diagonal BD is inclined at  $45^\circ$  to the VP & parallel to the HP. Draw its projection ?**
- Q.17) Draw the projection of a rhombus having diagonal 125 mm & 50 mm long & the smaller being parallel to both HP & VP ,while the other is inclined at  $30^\circ$  to HP ?**
- Q.18) A rhombus of diagonal 100 mm & 60 mm long , with the longer diagonal horizontal is a figure of top view of a square of 100 mm long diagonal, with a corner on the ground. Draw its front view & determine the angle which its surface makes with the ground ?**
- Q.19) A Plate having the shape of an isosceles triangle with base 50 mm & altitude 70 mm. It is so placed that in front view it is seen as an equilateral triangle of 50 mm long side & one of its side is inclined at  $45^\circ$  to X-Y . Project its top view?**
- Q.20) A semicircle plate of 80 mm diameter has its straight edge in the VP & inclined at  $45^\circ$  to the HP. The surface of plate makes an angle of  $30^\circ$  with the VP. Draw its projection?**
- Q.21) A rectangular plate ABCD measuring 60 mm  $\times$  30 mm has its shortest side is in the VP & inclined at  $30^\circ$  to the HP. Project its top view , if front view is a square of 30 mm long side ?**
- Q.22) A regular pentagon having side 35 mm has one of its side in the HP. Its plane is inclined at  $45^\circ$  to the HP. Draw its three views?**
- Q.23) A regular hexagon having side 40 mm resting on one of its corner is in the HP, its plane is inclined at  $45^\circ$  to the ground . Draw its three views?**
- Q.24) A square ABCD having side 50 mm has its plane perpendicular to both HP & VP. Draw its projection & show its traces also?**
- Q.25) The top view of the plane the surface of which is perpendicular to VP & inclined at  $60^\circ$  to HP is a circle of 60 mm diameter. Draw its three views ?**

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

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