



Question Bank on Computer Aided Engineering Drawing (22CED23)

Orthographic projection of Plane Surfaces (Module 1)

1. An equilateral triangular lamina of 40 mm side lies with one of its edges on HP such that the surface of the lamina is inclined to HP at 45 degrees. The edge on which it rests is inclined to VP at 60 degrees. Draw the projections and find the distance of the corner opposite to the resting side from HP.
2. An equilateral triangular lamina of 40 mm side lies on one of its sides on HP. The lamina makes 45° with HP and one of its medians is inclined at 40° to VP. Draw its projections and determine the apparent length of the resting side in front view.
3. An equilateral triangular lamina of 30 mm sides is resting on HP with one of its corners such that the side opposite to the resting corner is 20 mm above HP and makes an angle of 40 degrees to VP. Draw the projections and determine the inclination of the lamina with HP.
4. A square lamina of 40 mm side rests on one of its sides on HP. The lamina makes 30 degrees to HP & the side on which it rests makes 45 degrees to VP. Draw its projections.
5. A square plate of 30 mm sides rests on HP such that one of the diagonals is inclined at 30° to HP and 45° to VP. Draw its projections.
6. A rectangular lamina of sides 40 mm x 25 mm rests on HP on one of its shorter edges. The lamina is rotated about the side on which it rests till it appears as square in the top view. The side on which the lamina rests is inclined at 30 degrees to VP. Draw its projections and determine the inclination of the lamina with HP.
7. A pentagonal lamina of edges 25 mm is resting on HP with one of its sides such that the surface makes an angle 60 degrees with HP. The edge on which it rests is inclined at 45 degrees to VP. Draw its projections.
8. A pentagonal lamina having edges 30 mm is placed on one of its corner on HP such the surface makes an angle 30 degrees with HP and the perpendicular bisector of the edge passing through the corner on which the lamina rest is inclined at 45 degrees to VP. Draw the front & top view of the lamina.
9. A pentagonal lamina of sides 30 mm is having a side both on HP and VP. The surface of the lamina is inclined at an angle of 60° with HP. Draw the top and front views of the lamina.
10. A pentagonal lamina of edges 30 mm is resting on HP with one of its corners such that the edge opposite to this corner is 20 mm above HP, which also make an angle of 45 degrees with VP. Draw the projections of the lamina and find its surface inclination with HP.
11. A regular hexagonal lamina of sides 30 mm lying in such a way that one of its sides touches both the reference planes. If the lamina makes 60 degrees with HP, draw the projections of the lamina.
12. A hexagonal lamina of sides 25 mm rests on one of its sides on HP. The lamina makes 45 degrees to HP & the side on which it rests makes 30 degrees to VP. Draw its projections.
13. Draw the top view and front view of a hexagonal lamina of 30 mm sides having two of its edges parallel to both HP and VP and one its edges is 20 mm from each of the reference planes. The surface of the lamina is inclined at 50 degrees to HP.

14. A hexagonal lamina of sides 30 mm is lying in such a way that one of its corners is in HP and the corner opposite to this resting corner is touching VP. If the lamina makes 45 degrees HP, draw the projections of the lamina.
15. A circular lamina of 50 mm diameter rests on HP such that one of its diameters is inclined at 30 degrees to VP & 45 degrees to HP. Draw its top & front view.

