

Answer any five questions

1. A circular plate of 42 mm diameter rolls over a horizontal table clock wise without slipping. A point P on the circumference of the plate is in contact with the table surface in the beginning and after one complete revolution. Draw the path traced by the point. Draw a tangent and normal at any point on the curve.
2. Distance between two stations is 100 km and is represented on a certain map by a line 2.5 cm long. Find the R.F. of the scale of the map. Draw a diagonal scale showing single kilometer and long enough to measure up to 600 km. Indicate a distance of 473 km on this scale.
3. A line AB, 65 mm long, has its end A 20 mm above HP and 25 mm in front of VP. The end B is 40 mm above HP and 60 mm in front of VP.
 - (a) Draw the projections of the line and measure its true inclinations with HP and VP.
 - (b) Show and measure the apparent angles of inclination with HP & VP.
4. Draw the projections of a regular hexagonal lamina of 30 mm side, having one of its sides on the H.P. and inclined at 60° to the V.P., and its surface making an angle of 45° with the H.P.
5. A right regular pentagonal pyramid, side of base 30 mm and height 60 mm, rests on HP on one of its triangular faces such that its axis is parallel to the V.P. Draw the projections when the axis is 35 mm away from the V.P.
6. A cylinder of 40 mm diameter and height 70 mm rests on HP with its axis perpendicular to the HP. Draw the orthographic projections and the Isometric view of the cylinder. Show all the necessary construction lines on the drawing.
7. The figure shows a pictorial view of a Machine part. Draw
 - (a) Front View
 - (b) Top View

