UNIT – I

1. A fixed point is at a distance of 55mm from fixed straight line. Name the curve, Trace the path of the curve if e =1. Also draw tangent and normal to it at a distance of 45mm
2. A Fixed point is at a distance of 40mm from fixed straight line trace the path of the curve if e = 2/3. Draw tangent and normal to it at a dist. of 50mm from directrix
3. A Fixed point is at a distance of 50mm from fixed straight line trace the path of the curve if e = 3/2. Draw tangent and normal to it at a dist. of 40mm from directrix
4. Construct an Ellipse if the distance between focus and vertex 30mm and eccentricity is ¾ Draw tangent and normal to it at a dist. of 50mm from directrix
5. A circle of diameter 50mm rolls on a horizontal line for one revolution trace the path of curve. Also draw tangent and normal to it.
6. A circle of 50 mm diameter rolls on another circle of radius 60mm for one revolution. Trace the path of the curve
7. A circle of 40mm diameter rolls inside another circle of radius 80 mm from one revolution trace the path of the curve
8. Draw the in volute of a Pentagon of side 30mm
9. A Circle of 50mm diameter is unwounded from one of the end trace the path of the curve
10. An inelastic string of diameter 50mm is unwounded from one of the end. Trace the path of the curve.

UNIT - II

11. Draw the projections for the following points keeping the distance between the projectors as 25mm on the same reference line.

    A point K on HP and 30mm in front of VP B 50mm below HP 30mm behind VP

    C 35mm below HP on VP D 50mm below HP 20mm in front of VP

    E on HP 30mm above 50mm behind VP F 30 above HP 20mm in front of VP

12. A line AB 75mm long is inclined to HP at 30° and to VP at 45°. Draw is projections when one of the end is 20 above HP and 30 in front of VP.

13. The Top view of 70mm long line measures 60mm while its front view measures 55mm. Draw the projections of the straight line when one of the end is 30 above HP and 25 in front of VP

14. The end A of a line AB is 20 above and 30 in front of VP, While the end B is 50 above and 55infront of VP. The distance between projectors are 60mm apart Draw the projections and determine its inclinations.
15. A line AB 100mm long has its front view inclined at an angle of 45 ^{o} to XY. The point A is in the VP and 25mm above the HP. The length of the front view is 60mm. Draw The top view of the line and measure its length also find its inclination of AB with HP and VP.
16. A Pentagonal Plane of side 40mm has a circular hole of dia 20 is inclined to HP at 30° and its surface is inclined to VP at 45°. Draw its Projections draw its projections when one of the side is perpendicular to HP.
17. Draw the projections of a circular plane with a 50mm diameter, resting on a point A on its circumference in the HP such that its surface is inclined at 30° to HP and it is inclined to VP at 45° draw its projections
18. A Hexagonal Plane of side 30mm has its surface inclined to VP at 30° and one of its side inclined to HP at 45°. Draw its projections when one of the side is perpendicular to HP.

UNIT – III

19. A Pentagonal Prism of base side 30mm axis length 70mm has its axis inclined to HP at 30° and its edge inclined to VP at 45°. Draw its projections
20. A Hexagonal Prism of base side 30mm axis length 70mm has its axis inclined to HP at 30° and its edge inclined to VP at 45°. Draw its projections.
21. A Cylinder of diameter 40mm axis length 70mm has its edge inclined to HP at 30° and its axis inclined to VP at 45°. Draw its projections
22. A cone of Diameter 40mm axis length 70mm is resting on one of its generators on HP Draw its projections.
23. A Hexagonal Pyramid of side 30mm axis length 70mm has its axis inclined to HP at 30° and its edge inclined to VP at 45°. Draw its projections.
24. A Pentagonal Pyramid of side 30mm axis length 70mm has its axis inclined to HP at 30° and its edge inclined to VP at 45°. Draw its projections

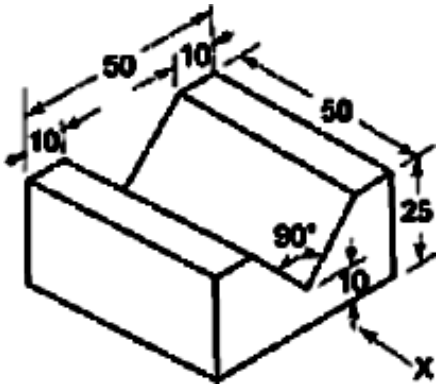
UNIT - IV

25. Draw the development of a Square Prism of base side 40mm axis length 60mm is sectioned by a plane inclined at 35° to HP and passing through midpoint of the axis of the cylinder.
26. Draw the development of a Pentagonal Pyramid of base side 30mm axis length 55mm is sectioned by a plane inclined at 35° to HP and passing through midpoint of the axis of the cylinder.

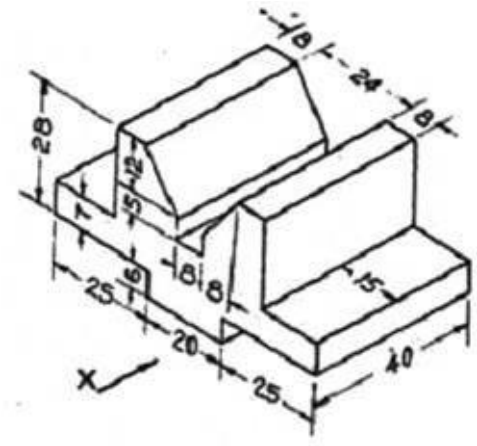
27. Draw the development of a cone of diameter 50mm axis length 65mm is sectioned by a plane inclined at 35° to HP and passing through midpoint of the axis of the cone.
28. Draw the development of a cylinder of diameter 50mm axis length 60mm is sectioned by a plane inclined at 35° to HP and passing through midpoint of the axis of the cylinder.
29. A hexagonal Prism, having base side 30mm axis length 65mm resting on its base on HP. It is cut by a section plane parallel to VP and 10mm in front of the axis of the prism. Draw its top view and sectional front view.
30. Draw the development of a cylinder of diameter 50mm axis length 60mm is sectioned by a plane inclined at 45° to HP and passing through 20mm from the top base

Unit -V

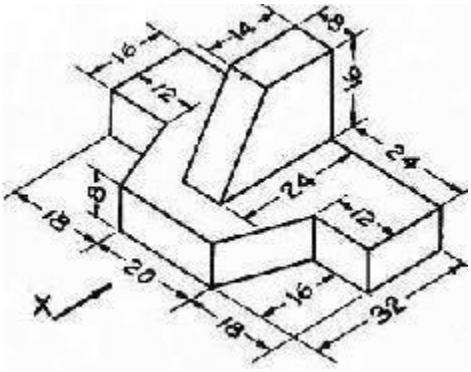
31. Draw the front view, top view and side view of the figure shown below. All dimensions are in mm



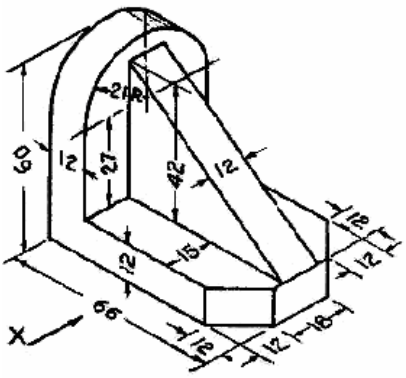
32. Draw the front view, top view and side view of the figure shown below. All dimensions are in mm



33. Draw the front view, top view and side view of the figure shown below. All dimensions are in mm



34. Draw the front view, top view and side view of the figure shown below. All dimensions are in mm



35. Draw the front view, top view and side view of the figure shown below. All dimensions are in mm