R16

Reg. No:

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1 **a** Draw an Ellipse with major axis of 80 mm and minor axis of 60 mm with concentric circles method. **6M**

   b Draw a parabola having a distance of 50 mm between the focus and the directrix. Draw the Tangent and normal at a point 35 mm from the focus. **6M**

OR

2 **a** Draw an Epi-cycloid with the rolling circle diameter of 40 mm on a base circle of 150 mm diameter. **6M**

   b Draw an involute of Equilateral triangle of side 20 mm **6M**

UNIT-II

3 **a** A line AB 100 mm length is inclined at 30 ^{o} to HP and 45 ^{o} to VP. The point if 15mm above HP and 20 mm in front of VP. Draw its projections **8M**

   b Draw the projections of a line of 90 mm length (i) Inclined at 45 ^{o} to HP, (ii) Inclined at 30 ^{o} to VP (iii) Parallel to both HP and VP at a distance of 20 mm from each plane. **4M**

OR

4 A point A is 20 mm above HP and 50 mm in front of VP. Another point B is 40 mm below the HP and 15 mm behind the VP. The distance between the projectors of the point measured parallel to XY is 75 mm. Draw the projections and find out its true length and true inclinations. **12M**

UNIT-III

5 Draw the projection of hexagonal plane resting on a corner and inclined at 45 ^{o} to HP and the diagonal passing through the corner is making an angle of 30 ^{0} with a VP **12M**

OR

6 A pentagonal prism with base length of 30 mm and height of 60 mm has one of its rectangular faces on HP and axis inclined to 60 ^{o} to VP. Draw its projections. **12M**

UNIT-IV

7 A hexagonal prism of side of base 30 mm and length of axis 75 mm, is resting on its bs its its base on HP. It is cut by a section plane inclined 35 ^{0} to HP and passing through top corner. Draw the front and sectional top views of the solid and true shape of the section. **12M**
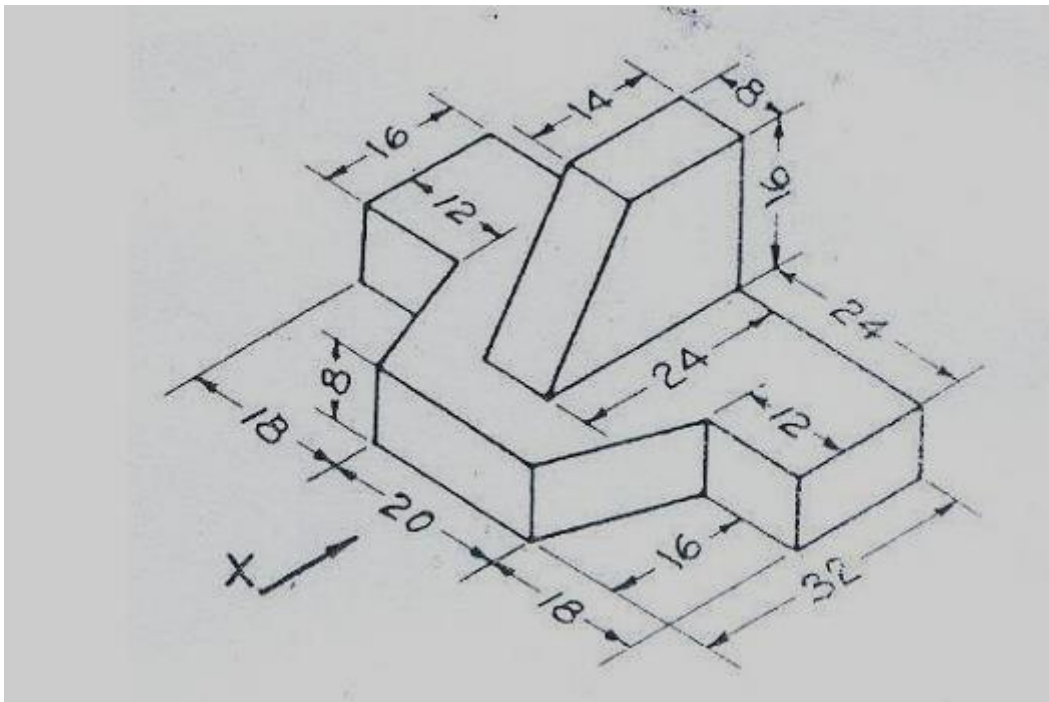
OR

8 A cone of 50 mm diameter and axis 70 mm long. Its base is on HP. It is cut by a sectional plane perpendicular to VP and inclined to HP at 45 ^{o} from apex 32mm Draw the projections of Front View, Sectional. Top View, True shape **12M**

UNIT-V

9 Draw the Isometric Projection of pentagonal prism of base side of 35 mm and axis 60 mm. The prism rests on its base on the HP with an edge of the base parallel to VP. **12M**

OR

10 Draw the three views of the figure shown in first angle projection **12M**

*** END ***