

Time: 3 Hours

Max. Marks: 60

**General Instructions:**

1. Solve any four questions.
2. All dimensions are in mm.
3. Use first angle method of projection.
4. Assume suitable dimension if it is necessary.

- Q1. a.) One end of a string of length 115 mm is fixed on a point on the circumference of a Disc of diameter 40 mm. The string is wound around the disc, keeping the string always tight. Draw the curve traced by the other end of the string. Name the curve also. 6
- b.) The pictorial view of a machine part is shown in figure 1. Draw 4
- i) Front view from A 4
  - ii) Top view 1
  - iii) Insert at least 6 Dimensions.

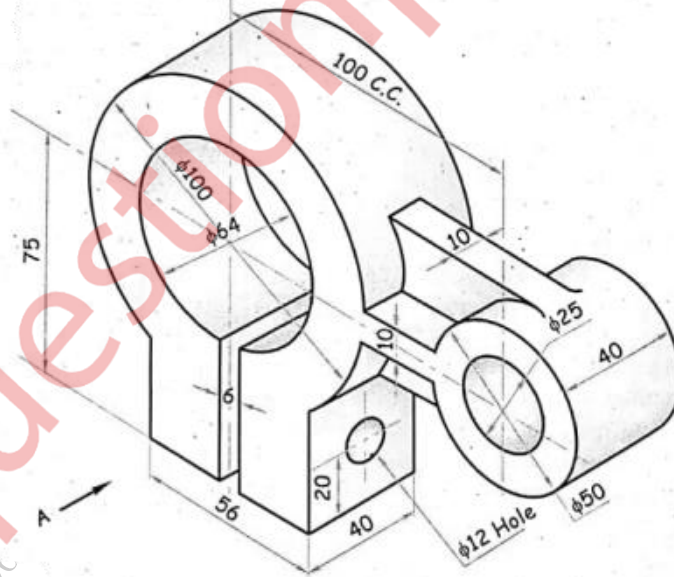


Figure 1

- Q2. A hexagonal pyramid side of base 30 mm and axis 60 mm long stand on an edge of base on HP with its apex being 45mm above HP. Draw the projections of the pyramid when the edge on HP makes an angle 45 degrees with VP. 15

Q 3

Following figure 2 shows the pictorial view of an object. Draw

i) Sectional front view along section A-A

5

ii) Top view.

4

iii) Right hand Side view

4

Insert at least 10 dimensions

2

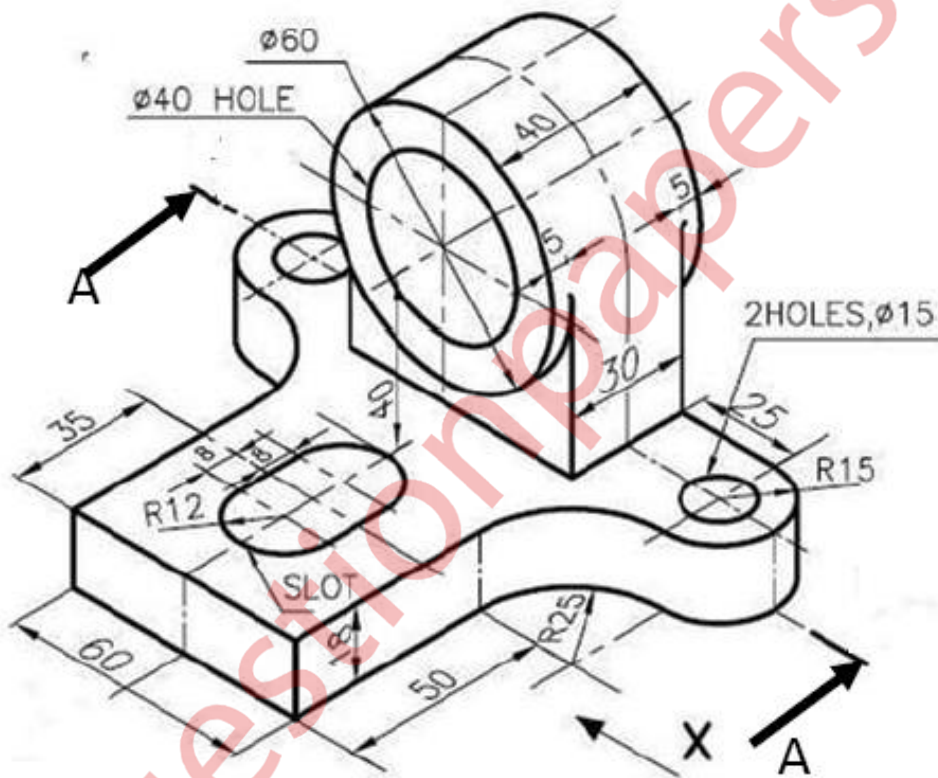


Figure 2

Q4

A right circular cone of diameter 60 mm and axis 75 mm is lying on HP on its curved surface. It is cut by horizontal section plane such that the true shape of the section is a parabola with axis equal to 50 mm. Draw Sectional TV, FV showing section plane and indicate the true shape of the section.

15

Q5.

a)

A pentagonal prism side of base 30 mm and axis length 60 mm has its base edge on HP and the base is inclined 45 degrees to HP. Draw projections of the prism.

6

- b) Figure 3 shows the front view and top view of an object. Draw its isometric view. 9

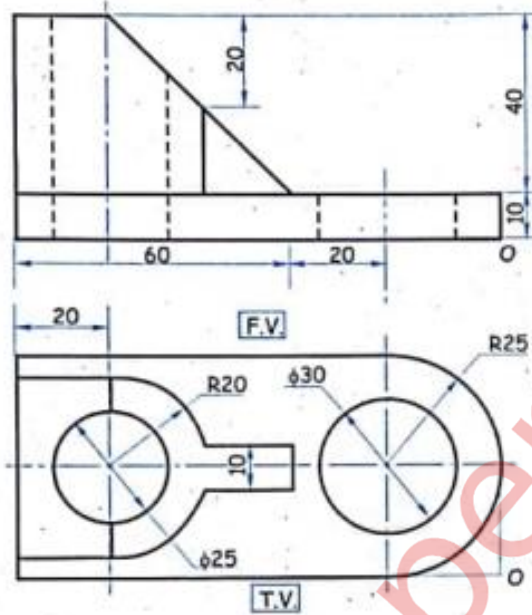


Figure 3

- Q6 a) One end "P" of the line PQ is 10mm above HP and 25mm in front of VP. The FV of the line measures 50mm and inclines 50 degrees to XY line. Draw projections of the line and find its inclination with HP and VP if the true length of the line is 75 mm. Consider the line being in first quadrant only. 9
- b) Draw the isometric view of the given views in figure 4. 6

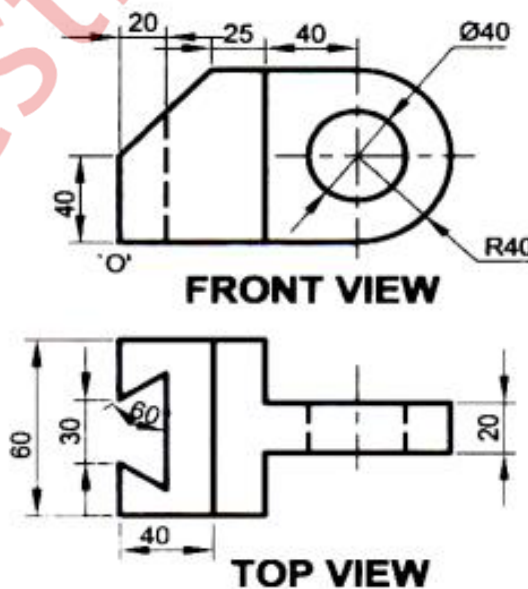


Figure 4