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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year II Semester Examinations, June - 2022
ENGINEERING GRAPHICS
(Computer Science and Engineering)

Time: 3 Hours   **Max. Marks: 75**

Answer any three questions
All questions carry equal marks
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1.a)   Draw a parabola if the distance of the focus from the directrix is 60 mm.
   b)   A circle of diameter 40 mm rolls inside another circle of radius 60 mm. Draw the hypocycloid traced by a point on the rolling circle initially in contact with the directing circle for one revolution.   [10+15]

2.a)   A line AB, 50 mm long, has its end A at 40 mm above the HP and 20 mm in front of the VP. The end B is closer to the HP but away from the VP. Draw the projections of the line if it is inclined to the HP at 30^0 and to the VP at 45^0.
   b)   A rectangle ABCD of size 30 mm $\times$ 20 mm is inclined to the HP at 30^0. Its shorter side AB is parallel to the HP and inclined at 45^0 to the VP. Draw the projections of the rectangle.   [10+15]

3.a)   A triangular prism, 40 mm side of base and 60 mm length of axis, has its axis perpendicular to the VP. Draw the projections if one of the rectangular faces is parallel to the HP and 20 mm above the HP.
   b)   A cone of base 60 mm diameter and height 80 mm is resting on a point on the circumference of base on the HP with its apex 55 mm above the HP. Draw its projections if its axis is inclined at 45^0 to the VP.   [10+15]

4.   A vertical square prism with a 60 mm base side and an 80 mm axis length, is completely penetrated by a horizontal square prism with a 40 mm side base and a 100 mm axis length such that their axes bisect each other. The faces of both the prisms are equally inclined to the VP. Draw the three views of the solids showing LOI.   [25]

5. Draw (a) Front view (b) Top view and (c) side view of the isometric view given in the figure 1 (All dimensions are in mm). [25]

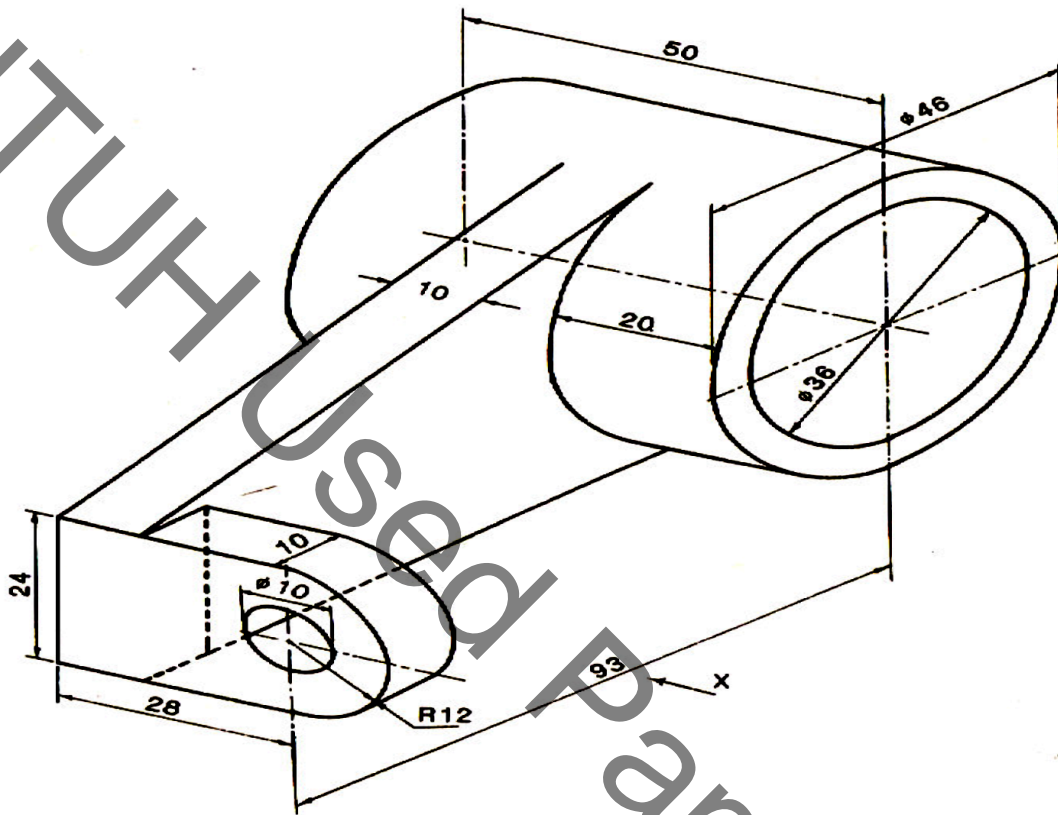**Figure 1**

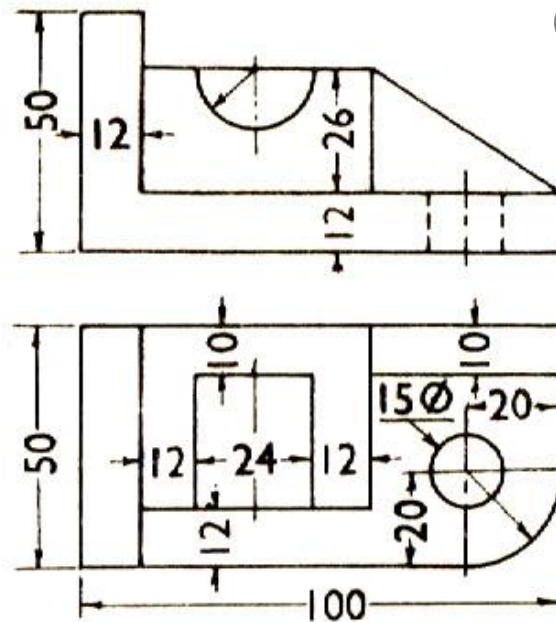6. Figure 2 below shows the FV and TV of the object. Draw its isometric view. (All dimensions are in mm). [25]

Figure 2
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