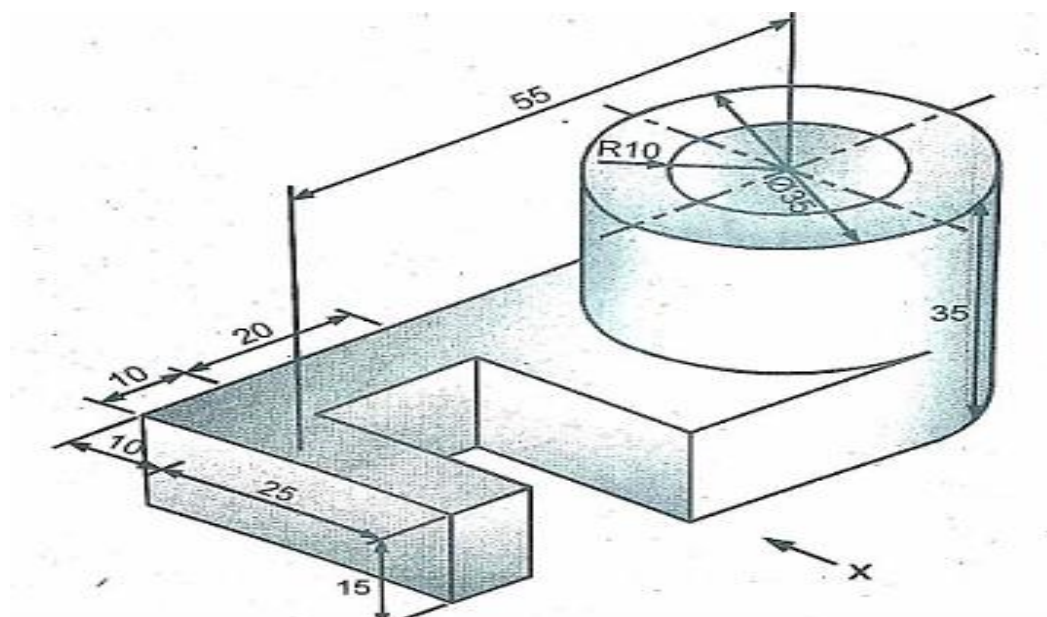# GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–I &II (SPFU) EXAMINATION – SUMMER-2019

Subject Code: ENG002   **Date: 30/05/2019**

Subject Name: Engineering Graphics

Time: 10:30 AM TO 01:30 PM   **Total Marks: 70**

Instructions:
1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

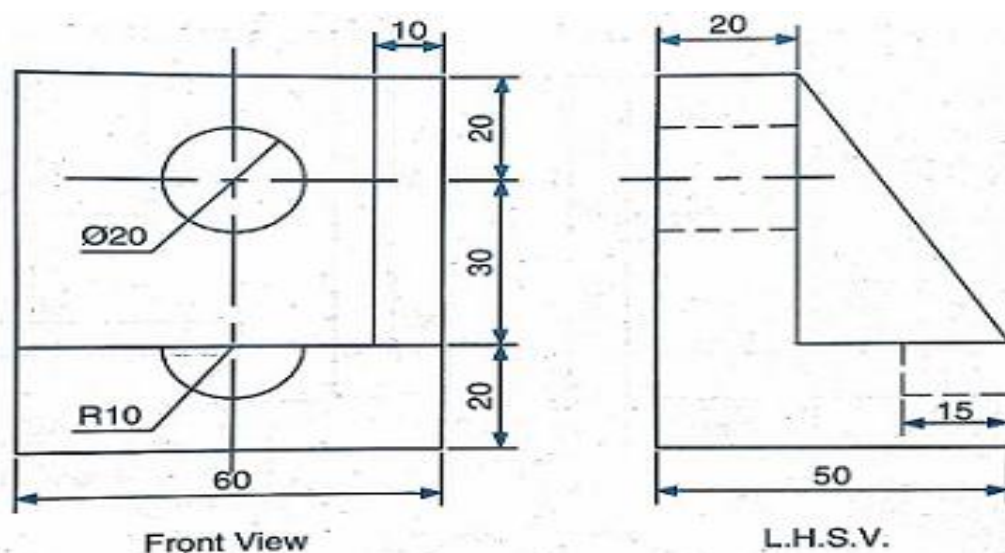|			
Q.1	**(a)**	(i)Construct a plain scale of R.F. = 1:10 showing the feet and inches and long enough to read the distance of 5 feet. Show on it the distance of 4 feet and 10 inches.	**04**
		(ii)Explain the different between the first angle projection and third angle projection.	**03**
	(b)	Construct the involute of a square of side 25 mm. Draw tangent and normal to the involute at any point on it.	**07**
Q.2	**(a)**	Construct the ellipse in the rectangle of the size 120 mm X 90 mm. Draw tangent and normal to the ellipse at given point.	**07**
	(b)	Draw the cycloid for a rolling circle of the diameter 50 mm when it rolls for one rotation. The moving point P is initially at the point of the contact between the circle and the straight line. Draw tangent and normal to the curve at any point on the curve.	**07**
Q.3	**(a)**	A line AB is 80 mm long. It is inclined at an angle of 45° to the HP and 30° to the VP. The end A is 20 mm above HP and 30 mm in front of VP. Draw the projection of the line AB. Find the elevation length and the plan length of the line. Determine the apparent inclination of the line AB with HP and VP.	**07**
	(b)	A regular hexagonal plane with side 40 mm is resting on HP on one of its sides. Draw the projections of the plane when it is inclined at 30° to HP and the side on which it rests on HP makes 45° with VP.	**07**
Q.4	**(a)**	A line AB 75 mm long is inclined at an angle of 45° to HP and 30° to VP. Its end point A is in HP as well as VP. Determine its apparent inclination with VP.	**07**
	(b)	A cylinder of base diameter 50 mm and axis 70 mm rest in the VP, has its inclination to 30° to the VP and front view of the axis is inclined at 30° to the ground line XY. Draw the projection of the cylinder.	**07**
Q.5	**(a)**	A regular pentagonal plane having the side 30 mm is resting on HP on one of its corners. The surface of the plane is inclined to HP at 45°. Draw the projection of the plane when the side opposite to the corner on which it rest on HP, is inclined at 30 to VP.	**07**
	(b)	Explain types of prisms and pyramids with neat sketch.	**07**

Q.6 Figure shows the pictorial view of the object. Draw the following Views; Front view, Top **14**
view and L.H.S.V. using First Angle Projection Method.

Q.7 **(a)** Differentiate: Isometric view And isometric Projection. **2**

(b) Draw the isometric view of the following orthographic views shown in Fig. **12**

| Front View | L.H.S.V. |

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