**CE101 Engineering Drawing July- Nov 2019**

**Indian Institute of Technology Guwahati**

**Lab Sheet-2 Curves and Conics Thursday Afternoon**

**Max Marks: 90 + 10 (overall neatness) Date: 22.08.2019**

1. Draw the involute of a hexagon of side 15 mm. **[20]**
2. A coin of 50 mm diameter rolls over a horizontal table without slipping. A point **P** on the circumference of the coin is initially in contact with the table surface. For one complete revolution, draw the path traced by the point **P**. **[25]**
3. The major axis and minor axis of the ellipse are 90 mm and 50 mm, respectively. Draw the corresponding ellipse using concentric circle method. Further, draw the tangent and normal to a point **Q** located on a line passing through the centre of the ellipse and inclined at 75º to the horizontal. **[25]**
4. A water jet is discharged from the ground level at an angle of 45º. It travels a distance of 9 m to meet the ground level at the same angle. Following the ‘Tangent method’, trace the path of the water jet. **[20]**