**CE101 Engineering Drawing July- Nov 2019**

**Indian Institute of Technology Guwahati**

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

**Max Marks: 90 + 10 (overall neatness) Date: 21.08.2019**

1. Draw the involute of a pentagon of side 20 mm. **[20]**
2. Construct a hypocycloid for one full revolution of a circle 30 mm diameter which rolls inside another circle of diameter 180 mm. Consider the initial contact of the Point **P** to be at the contact of the two circles. Draw the tangent and normal at any point of the hypocycloid belonging to the second half of the revolution. **[25]**
3. Construct a conic section whose double ordinate is 120 mm, abscissa is 60 mm and the transverse axis is 150 mm. Given, the eccentricity of the section is 1.5 **[25]**
4. Draw a parabola having a base of 60 mm and an axis of 25 mm inclined at an angle of 75º to the base. **[20]**