SRI RAMAKRISHNA INSTITUTE OF TECHNOLOGY, COIMBATORE-10
(Approved by AICTE, New Delhi - Affiliated to Anna University, Chennai)
Department of Mechanical Engineering

Class : I Year
Topic : Curves-Ellipse
Duration :

| Semester | $: I$ |
| :--- | :--- |
| Max Marks | $:$ |
| Date | $:$ |

1. The focus of a conic is 50 mm from the directrix. Draw the locus of a point ' $P$ ' moving in such a way that its distance from the directrix is equal to its distance from the focus. Name the curve. Draw a tangent to the curve at a point 60 mm from the directrix. (April/May 2011)

2. Draw a hyperbola when the distance between its focus and directrix is 50 mm and eccentricity is $3 / 2$. Also draw the tangent and normal at a point 25 mm from the directrix. (January 2010 AN)

3. The focus of a conic is 50 mm from the directrix. Draw the locus of a point ' P ' moving in such a way that its distance from the directrix is equal to its distance from the focus. Name the curve. Draw a tangent to the curve at a point 60 mm from the directrix. (January 2010 FN)

4. Draw the conic curve, if the distance of focus from the directrix is 70 mm and the eccentricity is $3 / 4$. Also draw a tangent and a normal at any point on the curve. (January 2009)

5. Draw the locus of a point P which moves in a plane in such a way that the ratio of its distances from a fixed point $F$ and a fixed straight line $A B$ is always $2 / 3$. The distance between the fixed point F and fixed straight line is 50 mm . Also draw a tangent and normal on a point on the locus at a horizontal distance of 55 mm from the fixed straight line. (May/June 2010)

6. Draw the locus of a curve traced by a point, when the distance of focus from the directrix is equal to 35 mm and eccentricity is $4 / 3$. Also draw the tangent and normal to the curve at any point on the curve (January 2009)

7. Draw the locus of the point P moving so that the ratio of the distance from a fixed point F to its distance from a fixed straight line is 1 . The point $P$ is at a distance of 30 mm from the fixed straight line. Also draw a tangent and normal to the generated curve. (January 2010 AN)

8. Draw the locus of a curve traced by a point, when the distance of focus from the directrix is equal to 35 mm and eccentricity is $3 / 4$. Also draw the tangent and normal to the curve at any point on the curve (January 2011)

9. The distance of the focus from the directrix is 40 mm . trace the path of a point which moves such that its distance from the focus is equal to its distance from the directrix. (January 2011)

10. Draw the locus of a point P which moves in a plane in such a way that the ratio of its distances from a fixed point $F$ and a fixed straight line $A B$ is always $2 / 3$. The distance between the fixed point F and fixed straight line is 50 mm . Also draw a tangent and normal on a point on the locus at a horizontal distance of 55 mm from the fixed straight line. (January 2012 AN)

