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KCET ONLINE TEST-17, MAY-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **PARABOLA, ELLIPSE, HYPERBOLA.**

1. **The equation of the parabola with its vertex at the origin, axis on the *y-*axis and passing through the point (6, –3) is**

(a)  (b) 

(c)  (d) 

1. **The point on the parabola , for which the ordinate is three times the abscissa, is**

(a) (6, 2) (b) (–2, –6)

(c) (3, 18) (d) (2, 6)

1. **The equation of latus rectum of a parabola is  and the equation of the tangent at the vertex is , then length of the latus rectum is**

(a)  (b) 

(c) 8 (d) 

1. **Latus rectum of the parabola  is**

(a) 2 (b) 4

(c) 8 (d) 1

1. **The length of latus rectum of the parabola  is**

(a) 3 (b) 6

(c)  (d) 9

1. **The focus of the parabola  is**

(a) (–8/5, 2) (b) (–5/8, 1/2)

(c) (1/2, 5/8) (d) (5/8, –1/2)

1. **The equation of the latus rectum of the parabola  is**

(a)  (b) 

(c)  (d) 

1. **If the axis of a parabola is horizontal and it passes through the points (0, 0), (0, –1) and (6, 1), then its equation is**

(a)  (b) 

(c)  (d) None of these

1. **The straight line  does not meet the parabola , if**

(a)  (b) 

(c)  (d) 

1. **If line  touches the parabola , then **

(a)  (b) *am*

(c)  (d) 

1. **The equation of the tangent to the parabola , which is perpendicular to the line  is**

(a)  (b) 

(c)  (d) 

1. **If the line  is a tangent to the curve , then *k* is equal to**

(a) 4 (b) 1/2

(c) –4(d) –1/2

1. **The equation of the ellipse whose foci are  and one of its directrix is , is**

(a)  (b) 

(c)  (d) None of these

1. **The length of the latus rectum of the ellipse  is**

(a)  (b) 

(c) 5/3 (d) 10/3

1. **If the length of the major axis of an ellipse is three times the length of its minor axis, then its eccentricity is**

(a)  (b) 

(c)  (d) 

1. **The length of the latus rectum of an ellipse is  of the major axis. Its eccentricity is**

(a)  (b) 

(c)  (d) 

1. **An ellipse is described by using an endless string which is passed over two pins. If the axes are 6 *cm* and 4 *cm*, the necessary length of the string and the distance between the pins respectively in *cm*, are**

(a)  (b) 

(c)  (d) None of these

1. **The locus of a variable point whose distance from (–2, 0) is  times its distance from the line , is**

(a) Ellipse (b) Parabola

(c) Hyperbola (d) None of these

1. **If the eccentricity of the two ellipse and  are equal, then the value of  is**

(a) 5/13 (b) 6/13

(c) 13/5 (d) 13/6

1. **The equation  represents**

(a) A circle (b) An ellipse

(c) A hyperbola (d) A rectangular hyperbola

1. **The eccentricity of the conic  is**

(a)  (b) 

(c)  (d) 

1. **If the line  be a tangent to the ellipse , then **

(a)  (b) 

(c)  (d) 

1. **The equation of normal at the point (0, 3) of the ellipse  is**

(a)  (b) 

(c) *x-*axis (d) *y-*axis

1. **If  is tangent on the ellipse , then the value of *c* is**

(a) 0 (b) 

(c)  (d) 

1. **The locus of the point of intersection of the lines  and  is**

(a) A parabola (b) An ellipse

(c) A hyperbola (d) None of these

1. **The directrix of the hyperbola is **

(a)  (b) 

(c)  (d) 

1. **The equation  represents**

(a) An ellipse (b) A pair of straight lines

(c) A hyperbola (d) None of these

1. **The equation of the directrices of the conic  are**

(a)  (b) 

(c)  (d) 

1. **If the line  be a tangent to the hyperbola , then **

(a) 16 (b) –16

(c)  (d) None of these

1. **The equation of the director circle of the hyperbola  is given by**

(a)  (b) 

(c)  (d) 