MASTER’S P.U COLLEGE, HASSAN, 573201.

KCET ONLINE TEST-16, APRIL-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **STRAIGHT LINES & CIRCLES.**

1. **If the middle points of the sides *BC, CA* and *AB* of the triangle *ABC* be (1, 3), (5, 7) and (– 5, 7), then the equation of the side *AB* is**

(a)  (b) 

(c)  (d) None of these

1. **If the coordinates of the vertices of the triangle *ABC* be (– 1, 6), (– 3, – 9), and (5, – 8) respectively, then the equation of the median through *C* is**

(a)  (b) 

(c)  (d) 

1. **The equation of the line perpendicular to the line  and passing through the point at which it cuts *x–*axis, is**

(a)  (b) 

(c)  (d) 

1. **The equation of the lines which passes through the point (3, – 2) and are inclined at to the line**

(a) 

(b) 

(c) 

(d) None of these

1. **The equations of the lines passing through the point (1, 0) and at a distance  from the origin, are**

(a) 

(b) 

(c) 

(d) None of these

1. **Equation of the line passing through (–1,1) and perpendicular to the line is**

(a)  (b) 

(c)  (d) 

1. **The equation of the straight line joining the point to the point of intersection of the lines  and  is**

(a)  (b) 

(c)  (d) 

1. **If the line  passes through the points (2, – 3) and (4, – 5), then =**

(a) (1, 1) (b) (– 1, 1)

(c) (1, – 1) (d) (– 1, – 1)

1. **The equation of the lines on which the perpendiculars from the origin make angle with *x*–axis and which form a triangle of area  with axes, are**

(a)  (b) 

(c)  (d) None of these

1. **The equation of the line which makes right angled triangle with axes whose area is 6 *sq. units* and whose hypotenuse is of 5 *units,* is**

(a)  (b) 

(c)  (d) 

1. **The diagonal passing through origin of a quadrilateral formed by  and  is**

(a)  (b) 

(c)  (d) None of these

1. **If *a* and *b* are two arbitrary constants, then the straight line will pass through**

(a)  (b) (1, 2)

(c)  (d) (2, 3)

1. **If  and  the lines   and **

(a) Do not intersect (b) Intersect

(c) Are concurrent (d) None of these

1. **If  then lines  and  are**

(a) Parallel

(b) Inclined at to each other

(c) Perpendicular to each other

(d) Inclined at to each other

1. **A straight line  makes an angle with another straight line which passes through origin. Then the equation of the line is**

(a)  (b) 

(c)  (d) 

1. **The line passing through the points (3, – 4) and (–2, 6) and a line passing through (–3,6) and (9, –18) are**

(a) Perpendicular

(b) Parallel

(c) Makes an angle with each other

(d) None of these

1. **If *p* and be the distances of origin from the lines  and , then =**

(a) *k* (b) 

(c)  (d) 

1. **The product of the perpendiculars drawn from the points  on the line, is**

(a)  (b) 

(c)  (d) 

1. **Let  be the distance between the lines  and , and  be the distance between the lines  and , then**

(a)  (b) 

(c)  (d) None of these

1. **The lines  and  are concurrent for**

(a) All *a* (b) only

(c)  (d) only

1. **The area of a parallelogram formed by the lines , is**

(a)  (b) 

(c)  (d) None of these

1. **The equation of the circle which touches *x-*axis and whose centre is (1, 2), is**

(a) 

(b) 

(c) 

(d) 

1. **The number of circles touching the line  and the *y-*axis is**

(a) Zero (b) One (c) Two (d) Infinite

1. **The equation of the circle passing through the origin and cutting intercepts of length 3 and 4 units from the positive axes, is**

(a) 

(b) 

(c) 

(d) 

1. **A circle  passing through  is concentric to the circle , then the value of *c* will be**

(a) – 4 (b) 4

(c) 0 (d) 1

1. **The equation of the circumcircle of the triangle formed by the lines  and , is**

(a)  (b) 

(c)  (d) 

1. **For what value of *k*, the points (0, 0), (1, 3), (2, 4) and (*k*, 3) are con-cyclic**

(a) 2 (b) 1

(c) 4 (d) 5

1. **The locus of the centre of a circle which passes through the point (*a*, 0) and touches the line , is**

(a) Circle (b) Ellipse

(c) Parabola (d) Hyperbola

1. **If the straight line touches the circle , then is**

(a)  (b) 

(c)  (d) 

1. **Give the number of common tangents to circle  and **

(a) 1 (b) 3

(c) 2 (d) None of these