MASTER’S P.U COLLEGE, HASSAN, 573201.

KCET ONLINE TEST-32, JUNE-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **1st PU GEOMETRY, TRIGONOMETRY (Including I.T.F), MATHEMATICAL REASONING, STATISTICS, PROBABILITY. DATE: 02/06/2020**

1. **(*n* even or odd) =**

(a)  (b) 

(c)  (d) None of these

1. **The value of  will be greatest when**

(a)  (b) 

(c)  (d) 

1. **If  then**

(a)  (b) 

(c)  (d) 

1. **If  then**

(a)  (b) 

(c) or  (d) or 

1. In 

(a)  (b) 

(c)  (d) 

1. **The number of pairs (*x*, *y*) satisfying the equations  and is**

(a) 2 (b) 4

(c) 6 (d) 

1. 

(a)  (b) 

(c)  (d) 

1. 

(a)  (b) 

(c)  (d) 

1. **The equation has**

(a) No solution (b) Unique solution

(c) Infinite number of solutions (d) None of these

1. **is equal to**

(a)  (b) 

(c)  (d) None of these

1. **The length of perpendicular from the point  upon the straight line   is**

(a)  (b) 

(c)  (d) 

1. **If lines  and  are concurrent, then *b* equals**

(a) 1 (b) 3

(c) 6 (d) 0

1. **The image of a point in the line , is**

(a)  (b) 

(c)  (d) 

1. **If the circle  bisects the circumference of the circle  then *k* =**

(a) 21 (b) – 21

(c) 23 (d) – 23

1. **If the line  touches the circle , then the value of *r* will be**

(a) 2 (b) 5

(c)  (d) 

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

(a) 4 (b) ½ (c) –4(d) –1/2

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

(a) (–4, 1) (b) (4, –1)

(c) (–4, –1) (d) (4, 1)

1. ***P* is any point on the ellipse , whose foci are *S* and *S*’. Then  equals**

(a) 3 (b) 12

(c) 36 (d) 324

1. **The equation of the tangent at the point (1/4, 1/4) of the ellipse  is**

(a)  (b) 

(c)  (d) None of these

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

(a)  (b) 

(c)  (d) 

1. **Negation of the compound proposition : If the examination is difficult, then I shall pass if I study hard**

(a) The examination is difficult and I study hard and I shall pass

(b) The examination is difficult and I study hard but I shall not pass

(c) The examination is not difficult and I study hard and I shall pass

(d) None of these

1. **If *p* and *q* are simple propositions, then  is false when**

(a) *p* is true and *q* is true (b) *p* is false and *q* is true

(c) *p* is true and *q* is false (d) Both *p* and *q* are false

1. **If *p* and *q* are simple propositions, then  is true when**

(a) *p* is true and *q* is true (b) Both *p* and *q* are false

(c) *p* is false and *q* is true (d) None of these

1. **The proposition  is**

(a) Contradiction (b) A tautology

(c) Either (a) or (b) (d) Neither (a) nor (b)

1. **For a given distribution of marks mean is 35.16 and its standard deviation is 19.76. The co-efficient of variation is**

(a)  (b)

(c)  (d)

1. **The mean and S.D. of 1, 2, 3, 4, 5, 6 is**

(a)  (b) 3, 3

(c)  (d) 

1. **In an experiment with 15 observations on *x*, the following results were available, . On observation that was 20 was found to be wrong and was replaced by the correct value 30. Then the corrected variance is**

(a)78.00 (b) 188.66

(c) 177.33 (d) 8.33

1. **The means of five observations is 4 and their variance is 5.2. If three of these observations are 1, 2 and 6, then the other two are**

(a) 2 and 9 (b) 3 and 8

(c) 4 and 7 (d) 5 and 6

1. **From a book containing 100 pages, one page is selected randomly. The probability that the sum of the digits of the page number of the selected page is 11, is**

(a)  (b) 

(c)  (d) None of these

1. **There are two children in a family. The probability that both of them are boys is**

(a)  (b) 

(c)  (d) None of these