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KCET ONLINE TEST-31, MAY-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **1st ALGEBRA, LIMITS. DATE: 31/05/2020**

1. **The number of non-empty subsets of the set {1, 2, 3, 4} is**

(a) 15 (b) 14

(c) 16 (d) 17

1. **Let,  Then**

(a)  (b) 

(c)  (d) None of these

1. **The statement *P*(*n*) “” is**

(a) True for all *n* > 1 (b) Not true for any *n*

(c) True for all *n* ∈ *N* (d) None of these

1. **If , then  is divisible by**

(a)  (b) 

(c)  (d) 

1. **The coefficients of three successive terms in the expansion of  are 165, 330 and 462 respectively, then the value of *n* will be**

(a) 11 (b) 10

(c) 12 (d) 8

1. **If the coefficient of  and terms in the expansion of are equal, then *r=***

(a) 12 (b) 10

(c) 8 (d) 6

1. 

(a) 100 (b) 120

(c)  (d) None of these

1. **A vertex of the linear inequalities ,  and , is**

(a) (1, 0) (b) (1, 1)

(c)  (d) 

1. **The graph of in equations  and  is located in**

(a) II quadrant (b) I, II quadrants

(c) I, II, III quadrants (d) II, III, IV quadrants

1. **The greatest possible number of points of intersection of 8 straight lines and 4 circles is**

(a) 32 (b) 64

(c) 76 (d) 104

1. **The number of divisors of 9600 including 1 and 9600 are**

(a) 60 (b) 58

(c) 48 (d) 46

1. **12 persons are to be arranged to a round table. If two particular persons among them are not to be side by side, the total number of arrangements is**

(a)  (b) 

(c)  (d) 

1. **How many numbers between 5000 and 10,000 can be formed using the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 each digit appearing not more than once in each number**

(a)  (b) 

(c)  (d) 

1. **If  then **

(a) 1 (b) 2

(c)  (d) 

1. ** will be purely imaginary, if **

(a)  (b) 

(c)  (d) None of these

1. 

(a)  (b) 

(c)  (d) 

1. **The roots of the equation  are**

(a) 1, 4 (b) 

(c)  (d) 1, 8

1. **If then **

(a) 3 (b) 2

(c) 1 (d) None of these

1. **If the A.M. of two numbers is greater than G.M. of the numbers by 2 and the ratio of the numbers is , then the numbers are**

(a) 4, 1 (b) 12, 3 (c) 16, 4 (d) None of these

1. **The sum of *n* terms of the series  is**

(a)  (b) 

(c)  (d) 

1. ** term of the series  will be**

(a)  (b) 

(c)  (d) 

1. 
2. (a) 1 (b) –1

(c) 0 (d) 

1. 
2. (a)  (b) 

(c)  (d) 

1. **The value of  is**
2. (a) 0 (b) 1/3

(c)  (d) 

1. ** is equal to**
2. (a) 0 (b) 1

(c) –1 (d) 

1. ** is**
2. (a) 2 (b) –2

(c)  (d) 

1. **The value of  is**

(a) 10/3 (b) 3/10

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

1. ** is equal to**

(a) 0 (b) 1

(c)  (d) 

1. **For  is equal to**

(a) *e* (b) 

(c)  (d) 

1. **The number of ways in which ten candidates  can be ranked such that  is always above  is**

(a)  (b) 

(c)  (d) 