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KCET ONLINE TEST-23, MAY-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **LIMITS, CONTINUIUTY & DIFFERENTIATION. DATE: 15/05/2020**

1. 

(a)  (b) 

(c)  (d) 0

1. **True statement for  is**

(a) Does not exist (b) Lies between 0 and 

(c) Lies between  and 1 (d) Greater then 1

1. ** for**

(a) No value of *n* (b) *n* is any whole number

(c)  only (d)  only

1. 

(a)  (b) 0

(c) Does not exist (d) None of these

1. **If [.] denotes the greatest integer less than or equal to *x*, then the value of is**

(a) 0 (b) 1

(c) –1 (d) None of these

1. **The values of *a* and *b* such that , are**
2. (a)  (b) 

(c)  (d) None of these

1. **If , then**
2. (a)  (b) 

(c)  (d) None of these

1. **If andthen  is equal to**
2. (a) –1 (b) 2

(c)  (d) 3

1. **The value of  for which the function may be continuous at , is**
2. (a) 1 (b) 2

(c) 3 (d) None of these

1. **If *f* is strictly increasing function, then  is equal to**
2. (a) 0 (b) 1

(c) –1 (d) 2

1. **If , the equation whose roots are andis**
2. (a)  (b) 

(c)  (d) 

1. **The functionwhere denotes the greatest integer function, is discontinuous at**
2. (a) All *x* (b) No *x*

(c) All integer points (d) *x* which is not an integer

1. 

(a)  (b) 

(c) 1 (d) – 1

1. **If ,then **

(a)  (b) 

(c)  (d) 

1. **If , then the value of at will be**

(a)  (b) 

(c)  (d) 

1. **If for all *x* and *y* and , , then will be**

(a) 2 (b) 4

(c) 6 (d) 8

1. **If , then at **

(a) –1 (b) – 2

(c) 1 (d) 2

1. **If  then **

(a) 0 (b) –1

(c) 1 (d) 2

1. **If and then **

(a)  (b) 

(c)  (d) 

1. **If and , then**

(a)  (b) 

(c)  (d) None of these

1. **If , then **

(a)  (b) 

(c)  (d) 

1. **If , then **

(a)  (b) 

(c)  (d) None of these

1. 

(a)  (b) 

(c)  (d) 

1. **If , then **

(a)  (b) 

(c)  (d) None of these

1. **If ,then is equal to**

(a) 1 (b) 

(c)Does not exist (d) None of these

1. **The derivative of with respect to at , is**

(a)  (b) 

(c)  (d) 1

1. **If is a polynomial of degree three, then =**

(a)  (b) 

(c)  (d) Constant

1. **If then **

(a)  (b) 

(c)  (d) 

1. **If  and , then the value of is equal to**

(a) 0 (b) 1

(c) –1 (d) 

1. **Let and be two functions having finite non-zero 3rd order derivatives and  for all, . If for all , then is equal to**

(a)  (b) 

(c)  (d) 