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KCET ONLINE TEST-14, APRIL-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **SETS, RELATIONS, FUNCTIONS, LIMITS, CONTINUITY, DIFFERENTIATION.**

1. **If  then  is equal to**

(a) *A* ∩ (*B* ∪ *C*) (b) *A* ∪ (*B* ∩ *C*)

(c) *A* × (*B* ∪ *C*) (d) *A* × (*B* ∩ *C*)

1. **If *A* = {2, 3, 4, 8, 10}, *B* = {3, 4, 5, 10, 12}, *C* = {4, 5, 6, 12, 14} then (*A* ∩ *B*) ∪ (*A* ∩ *C*) is equal to**

(a) {3, 4, 10} (b) {2, 8, 10}

(c) {4, 5, 6} (d) {3, 5, 14}

1. **In a battle 70% of the combatants lost one eye, 80% an ear, 75% an arm, 85% a leg, *x*% lost all the four limbs. The minimum value of *x* is**

(a) 10 (b) 12 (c) 15 (d) None of these

1. **The relation *R* defined on the set *A* = {1, 2, 3, 4, 5} by *R* = {(*x*, *y*) :  is given by**

(a) {(1, 1), (2, 1), (3, 1), (4, 1), (2, 3)} (b) {(2, 2), (3, 2), (4, 2), (2, 4)}

(c) {(3, 3), (3, 4), (5, 4), (4, 3), (3, 1)} (d) None of these

1. **Let  be a relation defined by . Then  is**

(a) An equivalence relation on *R* (b) Reflexive, transitive but not symmetric

(c) Symmetric, Transitive but not reflexive (d) Neither transitive not reflexive but symmetric

1. **Let *S* be the set of all real numbers. Then the relation *R* = {(*a*, *b*) : 1 + *ab* > 0} on *S* is**

(a) Reflexive and symmetric but not transitive

(b) Reflexive and transitive but not symmetric

(c) Symmetric, transitive but not reflexive

(d) Reflexive, transitive and symmetric

1. **If , then the value of **
2. 1 (b) –1 (c) 0 (d) 
3. **Let  be defined by , then **
4.  (b)  (c)  (d) 
5. **If , then**
6.  (b)  (c)  (d) 
7. **If  and , then **
8. 0.5 (b) 0.6 (c) 0.7 (d) 0.8
9. **If , , then **

(a) 1 (b)  (c)  (d) None of these

1. **Domain of the function  is**
2.  (b)  (c)  (d) 
3. **Range of the function  is**
4. (2, 16) (b) [2, 16] (c) [2, 16) (d) [2, 16)
5. **Let the function *f* be defined by , then  is**

(a)  (b)  (c)  (d) 

1. **If , where *n* is a positive integer, then **
2. 3 (b) 5 (c) 2 (d) None of these
3. 

(a) –1/10 (b) 1/10 (c) –1/8 (d) None of these

1. 
2.  (b)  (c)  (d) None of these
3. **If , then **

(a) 3 (b) 5 (c) 0 (d) –3

1. **If  are positive, then **

(a)  (b)  (c)  (d) 

1. **The value of ;  is**
2. (a)  (b)  (c)  (d) None of these
3. ** equals**
4. (a)  (b)  (c)  (d) 
5. **The value of is**

(a)  (b) 1 (c)  (d) None of these

1. **If , then  is**

(a) 3 (b) –1 (c) 0 (d) 1

1. ****=

(a)  (b) 

(c)  (d) 

1. **If then at =**

(a) – 2 (b) 2 (c)  (d) 0

1. **If then **

(a)  (b) 

(c)  (d) None of these

1. =

(a)  (b)  (c)  (d) 

1. **If , then **

(a) 0 (b)  (c) 1 (d) None of these

1. **If , then **

(a)  (b) 

(c)  (d) None of these

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

(a) 1/2 (b) 2/5

(c) 3/2 (d) 1/3