Question QMC1 :   
Answer:  
  
Question QMC2 : If f is a continuously differentiable real-valued function defined on the open interval (1, -4) such that f(3) = 5 and f1(x) > - 1 for all x, what is the greatest possible value of f(0)  
Answer:  
  
Question QMC3 :   
Answer:  
  
Question QMC4 : A real-valued function f defined on R has the following property. For every positive number ϵ, there exist a positive number δ. This property is equivalent to which of the following statement about f?  
Answer:  
  
Question QMC5 : Which of these functions is not uniformly continuous on (0,1)?  
Answer:  
  
Question QMC6 : Let Sn be a sequence of real numbers on a bounded set S, where Lin inf Sn ± lin sup Sn. Which of the following is not necessarily true?  
Answer:  
  
Question QMC7 : Which of the following is true about a uniformly continuous function, f on [a,b]?  
Answer:  
  
Question QMC8 :   
Answer:  
  
Question QMC9 : Which of the following is true  
Answer:  
  
Question QMC10 : Rational numbers can be expressed as ratio of true integers with repeated or terminations decimals. On the other hand, irrational numbers refer to any real numbers that are not rational. So, is I a rational number or an irrational number  
Answer:  
  
Question QMC11 : Given a non-empty subset S of R on the interval [0,5]. Then, any number greater than 5 is an upper bound of S, Since it is greater than ll of the numbers contained in S. Therefore, we can say that 5.01, 5.1, 6 and 7 are all upper bound of S. Among all these upper bound, the one with the smallest value is known as the \_\_\_\_\_\_\_\_ of S.   
Answer:  
  
Question QMC12 : The absolute value of a real non-zero number r, denoted by |r| is always  
Answer:  
  
Question QMC13 :   
Answer:  
  
Question QMC14 : By Lagrange’s means value theorem, f(x) can also be written as:  
Answer:  
  
Question QMC15 : What is the first derivative of the function f(x) = xn  
Answer:  
  
Question QMC16 : A monotonic sequence is said to be  
Answer:  
  
Question QMC17 : limn→∞⁡1n Converges to?  
Answer:  
  
Question QMC18 : limn→∞⁡1n2+1 Converges to?  
Answer:  
  
Question QMC19 :   
Answer:  
  
Question QMC20 : Every nonempty set of real numbers of that has an upper bound, also has a supremum in R. This is the \_\_\_\_\_\_\_\_\_\_\_\_  
Answer:  
  
Question QMC21 :  Two sets A and B are equal if every x ϵ A belongs to B and every y ϵ B belongs to A. This is called …  
Answer:  
  
Question QMC22 : Which word is the odd one out in set notation  
Answer:  
  
Question QMC23 :  Which of the following, concisely defines the union of A and B?  
Answer:  
  
Question QMC24 : A ∩ B is read as…  
Answer:  
  
Question QMC25 :  Which of the following is not true in set operations  
Answer:  
  
Question QMC26 :  The difference of A and B may also be defined concisely by A – B = …  
Answer:  
  
Question QMC27 : Let R be the set of real numbers and let Q be the set of rational numbers. Then R – Q consist of the…  
Answer:  
  
Question QMC28 : N ∪R=…?  
Answer:  
  
Question QMC29 : The set – theoretic product of A and B is denoted by …  
Answer:  
  
Question QMC30 :  The notation A/B or A ~ B represents …  
Answer:  
  
Question QMC31 :  Let the universal set be N=1, 2, 3,  .  .   ., find A' if A = {8, 9, 10, …}  
Answer:  
  
Question QMC32 :  Let the universal set be the set of positive integers and let A be the set of the positive even numbers. Find A'  
Answer:  
  
Question QMC33 : Given that A = {0, 1} and B = {1, 2, 3}. Find A ∪ B  
Answer:  
  
Question QMC34 :  Find A ∩ B if A = {0, 1} and B = {1, 2, 3}.  
Answer:  
  
Question QMC35 :  Find A – B if A = {0, 1} and B = {1, 2, 3}  
Answer:  
  
Question QMC36 : Find A ∩∅ if A = {0, 1}  
Answer:  
  
Question QMC37 : Concept of the divisibility only exists in set of\_\_\_\_\_\_\_\_\_\_  
Answer:  
  
Question QMC38 : Find A ∪ A' if the universal set is {1, 2, 3, 4} and A = {2, 3}.  
Answer:  
  
Question QMC39 : The number of elements in the Power set P(S) of the set S={[∅], 1, [2,3]} is  
Answer:  
  
Question QMC40 : If A and B are sets and A ∪ B =A ∩ B, then    
Answer:  
  
Question QMC41 : The union of the sets {1,2,5} and {1,2,6} is the set ................   
Answer:  
  
Question QMC42 : The intersection of the sets {1,2,5} and {1,2,6} is the set ……………   
Answer:  
  
Question QMC43 :  Two sets are called disjoint if their ………….. is empty set.   
Answer:  
  
Question QMC44 :  Which of the following two sets are disjoint?  
Answer:  
  
Question QMC45 :  The complement of the set A is ………..  
Answer:  
  
Question QMC46 :  Individual objects in a set are called …………..  
Answer:  
  
Question QMC47 :  Set {x: x is an odd number between 10 and 18}  
Answer:  
  
Question QMC48 :  Let A = {1, 2, 3, 4}, B = {2, 4, 6, 8} and C = {3, 4, 5, 6}. Find A ∪ C  
Answer:  
  
Question QMC49 : Find the equation of the circle centre (2, - 3) and radius 4  
Answer:  
  
Question QMC50 :  Find the distance between the points Z1 and Z2, given that Z1 = 3 + 2i and Z2 = 4 + 3i  
Answer:  
  
Question QFB1 : If In=[0,1n ] for n∈N, then In⊇In+1 for each n∈N so that this sequence of intervals is \_\_\_\_\_\_\_\_\_\_  
Answer: Nested  
  
Question QFB2 : A positive real number is rational if and only if its decimal representation is \_\_\_\_\_\_\_\_\_\_\_\_\_  
Answer: Periodic  
  
Question QFB3 : The unit interval [0, 1] = {x∈R:0≤x≤1} is \_\_\_\_\_\_\_\_  
Answer: Not countable  
  
Question QFB4 : If C is an infinite set and B is a finite set, then C\B is an \_\_\_\_\_\_\_\_    
Answer: infinite set  
  
Question QFB5 : If xn is an unbounded increasing sequence, then lim(xn) is \_\_\_\_  
Answer: Infinite  
  
Question QFB6 : . Let (xn) and (yn) be two sequences of positive real numbers and suppose that for L∈R, L>0 we have limxnyn=L.Then limxn= +∞ if and only if limyn is an \_\_\_\_\_\_\_\_   
Answer: Infinite  
  
Question QFB7 : Consider the series generated by {(-1)n}n=0 ∞ that is the series ∑n=0∞(-1)n=(+1) + (-1) + (+1) +… This series is a \_\_\_\_\_\_\_\_   
Answer: Divergent  
  
Question QFB8 : A function meant a definite formula such as fx=x2+3x+5 which associates to each real number x another number f(x) then f(-4) is \_\_\_\_  
Answer: 9  
  
Question QFB9 : A function which is both one-one and onto is known as \_\_\_\_\_\_\_\_\_\_   
Answer: Bijective  
  
Question QFB10 : The limit of the sequence 1n2+1 is \_\_\_\_\_\_\_  
Answer: 1  
  
Question QFB11 : The limit of the sequence 2nn2+1 is \_\_\_\_\_\_\_  
Answer: 2  
  
Question QFB12 : The Bolzano-Weierstrass theorem say that a bounded sequence of real numbers has a \_\_\_\_\_\_\_\_  
Answer: divergent subsequence    
  
Question QFB13 : . A monotone sequence of real number is properly divergent if and only if it is an \_\_\_\_\_\_\_\_  
Answer: Unbounded  
  
Question QFB14 : Consider the series ∑n=1∞1n(n+1)=11.2+12.3+13.4+… this series converges to \_\_\_\_\_\_\_\_\_  
Answer: 0  
  
Question QFB15 : The limit limx→∞⁡xn is \_\_\_\_\_\_\_   
Answer: Infinite  
  
Question QFB16 : The limit limx→0⁡11+e1x is \_\_\_\_\_\_\_  
Answer: 1  
  
Question QFB17 : The limit limx→-2⁡x3  
Answer: -8  
  
Question QFB18 : Let f be the rational function defined by fx=2x7-9x6+11x2-24x9-10x8-6x+7 , limx→-1⁡f(x) is \_\_\_\_\_\_\_\_\_\_\_   
Answer: 2  
  
Question QFB19 :   
Answer: 7  
  
Question QFB20 :   
Answer: 3  
  
Question QFB21 : The limw→-2⁡3w3+7w2 is \_\_\_\_\_\_\_  
Answer: 2  
  
Question QFB22 : " + " is \_\_\_\_\_\_\_\_\_\_\_ operation on $$\mathbb{R}$$  
Answer: binary operation  
  
Question QFB23 : If a real number is not rational then it is an \_\_\_\_\_\_\_  
Answer: Integer  
  
Question QFB24 : If a real number is not rational then it is an \_\_\_\_\_\_\_\_\_\_ number  
Answer: Irrational  
  
Question QFB25 : A number which is neither positive nor negative is  
Answer: 0  
  
Question QFB26 : The supremum is also called the \_\_\_\_ upper bound  
Answer: Least  
  
Question QFB27 : The harmonic series \_\_\_  
Answer: Diverges  
  
Question QFB28 : A monotone sequence of real numbers is properly divergent if and only if it is \_\_\_\_\_\_\_  
Answer: Unbounded  
  
Question QFB29 : π is an example of \_\_\_\_\_\_\_\_\_\_\_ numbers  
Answer: Irrational  
  
Question QFB30 : Concept of the divisibility only exists in set of \_\_\_\_\_\_\_\_\_\_  
Answer: Integers  
  
Question QFB32 : A convergent sequence has only \_\_\_\_\_\_\_\_\_\_\_\_\_\_ limit(s)  
Answer: 1  
  
Question QFB33 : Every convergent sequence has \_\_\_\_\_\_\_\_\_\_\_one limit  
Answer: 7  
  
Question QFB34 : Give the next 3 terms of the sequence 0,1,1,2,3,5,8,………,\_\_\_\_  
Answer: 13, 21, 34  
  
Question QFB35 : Two Sets A and B are said to be \_\_\_\_\_\_\_ if and only if they have the same elements but possibly with different listings.  
Answer: Equal  
  
Question QFB36 :    
Answer: 4  
  
Question QFB37 : List the first 3 terms of the inductively defined sequence x1:=1, x2+1:=3xn+1, \_\_\_\_\_\_\_\_\_\_  
Answer: 1,4,13  
  
Question QFB38 : A set is said to be \_\_\_\_\_\_\_ if the process of counting the element in the set terminates.  
Answer: Finite  
  
Question QFB39 : A set is said to be \_\_\_\_\_\_\_\_\_\_ if its either empty or it has n elements for some  
Answer: Finite  
  
Question QFB40 : The property of a natural numbers which states that every nonempty subset of a natural number has a least element is termed well \_\_\_\_\_ principle   
Answer: Ordering  
  
Question QFB41 : Abounded sequence of real numbers has a \_\_\_\_ subsequence  
Answer: Convergent  
  
Question QFB42 : A function f:A→R is said to be \_\_\_\_ on A if there exists a constant M > 0 such that f(x)≤M for all x in A  
Answer: Bounded  
  
Question QFB43 : The theorem that a sequence in R can have at most one limit is the \_\_\_\_.  
Answer: Uniqueness  
  
Question QFB44 : A sequence that has no limit is said to be \_\_\_\_  
Answer: Divergent  
  
Question QFB45 : For x and y an element of a natural number N, (-x)(-y) equal\_\_\_\_  
Answer: Xy  
  
Question QFB46 : A set N is called a subset of a set M if every \_\_\_\_\_\_\_ of N is a member of M.  
Answer: Element  
  
Question QFB47 : The set B of second elements of a function f is called the \_\_\_\_ of the function.  
Answer: Range  
  
Question QFB48 : The set A of first elements of a function f is called the \_\_\_\_of the function.  
Answer: Domain  
  
Question QFB49 : Let A and B be two non- empty sets then A∩B=∅ shows that A and B are\_\_\_\_ sets  
Answer: Disjoint  
  
Question QFB50 : A set is said to be \_\_\_\_\_\_ if it contains no element.  
Answer: Null  
  
Question QFB31 : Find the lim of 3x6+5x-8 as x tends to zero  
  
Answer: 8