ECAT Mathematics Chapter 23

Sr	Questions	Answers Choice
1	The set Q	A. Forms a group under addition B. Does not form a group C. Contains no additive indentity D. Contains no additive inverse
2	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
3	The set of all positive even integers is	A. Not a group B. A group w.r.t subtraction C. A group w.r.t division D. A group w.r.t multiplication
4	The set {1,-1, i, -i} form a group under	A. Addition B. Multiplication C. Subtraction D. None
5	The multiplicative inverse of -1 in the set {1-,1} is	A. 1 B. -1 C. ±1 D. 0 E. Does not exist
6	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
7	The set of the first elements of the ordered pairs forming a relation is called its	A. Function on B B. Range C. Domain D. A into B
8	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
9	Which of the following is the subset of all sets	A. Φ B. {1,2,3} C. {Φ} D. {0}
10	The multiplicative inverse of x such that x = 0 is	A. -x B. Does not exist C. 1/x D. ±1
11	The complement of set A relative to universal set U is the set	A. {x / x∈ A∧ x∈ U} B. {x / x∉ A∧ x ∈ U} C. {x / x∈ A and x ∉ U} D. A-U
12	Let A,B, and C be any sets such that A∪B = A∪C and A∩B = A∩C then	A. A≠ C B. B = C C. A = B D. A≠ B
13	Given X,Y are any two sets such that number of elements in set X = 28, number of elements in set Y = 28, and number of elements in set X∪Y = 54, then number of elements in set X∩Y =	A. 4 B. 3 C. 2 D. 1
14	For any set X, X∪X is	A. X B. X' C. Φ D. Universal Set
15	G = {e, a, b, c} is an Abelian group with e as identity element The order of the other elements are	A. 2,2,2 B. 3,3,3 C. 2,2,4

		D. 2,3,4
16	Z is the set of integers (Z.*) is a group with a * b = a +b +1, a,b ∈ G.then inverse of a is	A. -a B. a +1 C. -1-a D. None of these
17	Which of the following has the same value as i113	A. i B. -1 C. -i D. 1
18	If z1 = 2 + 6i and z2 = 3 + 7i then which expression defines the product of z1 and z2	A. 36 +(-32)i B. -36+32i C. 6+(-11)i D. 0, +(-12)i
19	Under multiplication, solution set of is	A. Groupoid B. Abelian group C. Semi group D. All of these
20	Identity w.r.t intersection in a power set of any set is	A. ⌀ B. Set itself C. Singleton set D. {0}