

Mathematics ECAT Pre Engineering Chapter 2 Set, Functions and Groups Online Test

Sr	Questions	Answers Choice
1	Power set of X i.e $P(X)$ _____ under the binary operation of union U	A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
2	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
3	The set $\{Z \setminus \{0\}\}$ is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
4	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
5	The set $\{1, -1, i, -i\}$	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
6	The set of complex numbers forms	A. Commutative group w.r.t addition B. Commutative group w.r.t multiplication C. Commutative group w.r.t division D. Non commutative group w.r.t addition
7	The multiplicative inverse of -1 in the set $\{1, -1\}$ is	A. 1 B. -1 C. +1 D. 0
8	The set $\{-1, 1\}$ is	A. Group under the multiplication B. Group under addition C. Does not form a group D. Contains no identity element
9	Question Image 	A. Addition B. Multiplication C. Division D. Both addition and multiplication
10	The set of integer is	A. Finite group B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group
11	To each element of a group there corresponds _____ inverse element	A. Two B. One C. No D. Three
12	The function $f\{(x, y) \mid y = ax^2 + bx + c\}$ is	A. One-one function B. Constant function C. Onto function D. Quadratic function
13	The graph of a quadratic function is	A. Circle B. Straight line C. Parabola D. Triangle
14	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
		A. Relation in B - -

15	The set of the first elements of the orders pairs forming a relations is called its	B. Range C. Domain D. Relation in A
16	If $#n = (n-5)^2 + 5$, then find $#3 \times #4$.	A. 54 B. 12 C. 4 D. 9
17	Question Image	
18	The set $\{ \{a, b\} \}$ is	A. Infinite set B. Singleton set C. Two points set D. Empty set
19	Question Image	A. Singleton set B. A set with two points C. Empty set D. None of these
20	Φ set is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection
21	In a country, 55% of the male population has houses in cities while 30% have houses both in cities and in village. Find the percentage of the population that has house only in villages.	A. 45 B. 30 C. 25 D. 50
22	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
23	Multiplicative inverse of 0 is	A. 0 B. 1 C. +1 D. Does not exist
24	The identity elements with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
25	Question Image	A. -x B. Infinite set C. $\{-4, 4\}$ D. None of these
26	Question Image	A. $1/x$ B. -x C. 2x D. $0.5x$
27	Additive inverse of -a -b is	A. a B. -a + b C. a - b D. a + b
28	If a set S contains "n" elements then P (S) has number of elements	A. 2^{n+1} B. 2^{2n} C. $2 \cdot n$ D. 2^{n+1}
29	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
30	The set $\{-1, 1\}$ is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division