

ECAT Mathematics Chapter 2 Set, Functions and Groups

Sr	Questions	Answers Choice
1	If $n(X) = 18$, $n(X \cap Y) = 7$, $n(X \cup Y) = 40$ then $n(Y) =$	A. 1 B. 12 C. 5 D. 29
2	If $A \subseteq B$, and B is a finite set, then	A. $n(A) < n(B)$ B. $n(A) < n(B)$ C. $n(A) \leq n(B)$ D. $n(A) \geq n(B)$
3	Group of none-singular matrices under multiplication is	A. None-Abelian group B. Semi group C. Abelian group D. None of these
4	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
5	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
6	The set of even prime numbers is	A. $\{2, 4, 6, 8, 10\}$ B. $\{2, 4, 6, 8, 10, 12\}$ C. $\{1, 3, 5, 7, 9\}$ D. $\{2\}$
7	Which of the following is the definition of singleton	A. The objects in a set B. A set having no element C. A set having no subset D. None of these
8	Additive inverse of $-a - b$ is	A. a B. $-a + b$ C. $a - b$ D. $a + b$
9	Write down the power set of $\{9, 11\}$	
10	<div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Question Image</div>	A. $1/x$ B. $-x$ C. $2x$ D. $0.5x$
11	If P is a proposition then its negative is denoted by	
12	The set X is	A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these
13	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
14	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
15	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
16	For any two sets A and, $A \subseteq B$ if	A. $x \in A \Rightarrow x \in B$ B. $x \notin A \Rightarrow x \notin B$ C. $x \in A \Rightarrow x \notin B$ D. $x \notin A \Rightarrow x \in B$

D. None of these

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Question Image

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The set $\{\mathbb{Z} \setminus \{0\}\}$ is group w.r.t

- A. Addition
- B. Multiplication
- C. Division
- D. Subtraction

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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

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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