

ECAT Mathematics Chapter 2 Set Function and Groups Online Test

Sr	Questions	Answers Choice
1	If $B \subseteq A$, then complement of B in A is = ----- -----	A. $A-B$ B. $A \cap B$ C. $B-A$ D. $A \cup B$
2	The function whose range consists of just one element is called	A. One-One Function B. Identity Function C. Onto Function D. Constant Function
3	The geometrical representation of a linear function is	A. Circle B. Parabola C. Straight line D. None of these
4	The set $(\mathbb{Z}, +)$ forms a group	A. Forms a group w.r.t. addition B. Non commutative group w.r.t. multiplication C. Forms a group w.r.t multiplication D. Doesn't form a group
5	What is the number of elements of the power set of $\{0, 1\}$	A. 1 B. 2 C. 3 D. 4
6	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
7	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. $\{2\}$
8	Question Image	
9	Multiplicative inverse of "1" is	A. 0 B. -1 C. 1 D. $\{0, 1\}$
10	Question Image	A. A B. B C. U D. None of these
11	The set \mathbb{Q}	A. Forms a group under addition B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
12	The set of rational numbers is subset of	A. The set of natural numbers B. The set of real numbers C. The set of integers D. The set of whole numbers
13	The contra positive of $p \rightarrow q$ is	A. $q \rightarrow p$ B. $\sim q \rightarrow \sim p$ C. $\sim p \rightarrow \sim q$ D. None of these
14	Which of the following is the subset of all sets	A. Φ B. $\{1, 2, 3\}$ C. $\{\Phi\}$ D. $\{0\}$
15	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
16	Question Image	A. A finite set B. An infinite set C. An empty set

		D. None of these
17	$(A \cup B) \cup C = \text{-----}$	A. $A \cap B(B \cup C)$ B. $A \cup (B \cup C)$ C. $A \cup (B \cap C)$ D. None of these
18	Question Image	A. $A = B$ B. $B = C$ C. $A = C$ D. None of these
19	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
20	Z is a	A. Infinite set B. Finite set C. Singleton set D. Set of all integers
21	Onto function is also called	A. Bijective function B. Injective function C. Surjective function D. None of these
22	Question Image	A. $-x$ B. Infinite set C. $\{-4, 4\}$ D. None of these
23	The multiplicative inverse of -1 in the set $\{1, -1\}$ is	A. 1 B. -1 C. 0 D. Does not exist
24	Under multiplication, solution set of is	A. Groupoid B. Abelian group C. Semi group D. All of these
25	Question Image	A. 3 B. 1 C. 2 D. 4
26	The number of subsets of $B = \{1, 2, 3, 4, 5\}$	A. 10 B. 32 C. 16 D. 5
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. n^2
29	Which of the following statement is true?	A. A set is a collection of non-empty object B. A set is a collection of only numbers C. a set is any collection of things D. a set is well-defined collection of objects
30	Power set of X i.e $P(X)$under the binary operation of union \cup	A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
31	The set $\{1, -1, 1, -1\}$, form a group under	A. Addition B. Multiplication C. Subtraction D. None
32	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
33	The set of natural numbers is a subset of	A. $\{1, 2, 3, \dots, 100\}$ B. The set of whole numbers C. $\{2, 4, 6, 8, \dots\}$ D. None of these
		A. Forms a group w.r.t addition B. Non commutative group w.r.t multiplication

34	The set $(\mathbb{Z}, +)$ forms a group	<p>B. non commutative group w.r.t multiplication</p> <p>C. Forms a group w.r.t multiplication</p> <p>D. Doesn't form a group</p>
35	The complement of set A relative to universal set U is the set	<p>A. $\{x / x \in A \wedge x \in U\}$</p> <p>B. $\{x / x \notin A \wedge x \in U\}$</p> <p>C. $\{x / x \in A \text{ and } x \notin U\}$</p> <p>D. $A - U$</p>
36	Question Image	
37	The set of all positive even integers is	<p>A. Not a group</p> <p>B. A group w.r.t subtraction</p> <p>C. A group w.r.t division</p> <p>D. A group w.r.t multiplication</p>
38	If $z_1 = 2 + 6i$ and $z_2 = 3 + 7i$ then which expression defines the product of z_1 and z_2	<p>A. $36 + (-32)i$</p> <p>B. $-36 + 32i$</p> <p>C. $6 + (-11)i$</p> <p>D. $0, +(-12)i$</p>
39	$(A \cap B)^c =$	<p>A. $A \cap B$</p> <p>B. $(A \cup B)^c$</p> <p>C. $A^c \cup B^c$</p> <p>D. Φ</p>
40	Question Image	
41	If $0 = \{1, 3, 5, \dots\}$, then $n(0) =$	<p>A. Infinite</p> <p>B. Even numbers</p> <p>C. odd integers</p> <p>D. 99</p>
42	$(A \cap B)^c =$ -----	<p>A. $A^c \cup B^c$</p> <p>B. $A^c \cup B$</p> <p>C. $A^c \cap B$</p> <p>D. None of these</p>
43	If A is a subset of B and B contains at least one element which is not an element of A, then A is said to be	<p>A. Improper subset of B</p> <p>B. Super set of B</p> <p>C. Proper subset of B</p> <p>D. None of these</p>
44	A conjunction of two statement p and q is true only if	<p>A. p is true</p> <p>B. q is true</p> <p>C. Both p and q are true</p> <p>D. both p and q are false</p>
45	Question Image	<p>A. $1/x$</p> <p>B. $-x$</p> <p>C. $2x$</p> <p>D. $0.5x$</p>
46	The negation of given number is a	<p>A. Binary operation</p> <p>B. Unary operation</p> <p>C. Relation</p> <p>D. None of these</p>
47	The set $(\mathbb{Q}, .)$	<p>A. Forms a group</p> <p>B. Does not form a group</p> <p>C. Contains no additive identity</p> <p>D. Contains no additive inverse</p>
48	Question Image	<p>A. Addition</p> <p>B. Multiplication</p> <p>C. Division</p> <p>D. Both addition and multiplication</p>
49	$A = B$ if	<p>D. A is equivalent to B</p>
50	Question Image	<p>A. Conclusion</p> <p>B. Implication</p> <p>C. Antecedent</p> <p>D. Hypothesis</p>
51	A monoid $(G, *)$ is said to be group if	<p>A. have identity element</p> <p>B. is commutative</p> <p>C. have inverse of each element</p> <p>D. None of these</p>
52	The statement that a group can have more than one identity elements is	<p>A. True</p> <p>B. False</p> <p>C. Ambiguous</p> <p>D. Some times true</p>
53	Question Image	<p>A. a constant function</p> <p>B. linear function</p> <p>C. quadratic funtion</p> <p>D. none of these</p>

D. none of these

54	Question Image	
55	For any set B, $B \cup B'$ is	A. Is set B B. Set B' C. Universal set
56	A conditional "if p then q" is denoted by	
57	The set $\{ \{a, b\} \}$ is	A. Infinite set B. Singleton set C. Two points set D. Empty set
58	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
59	If $E = \{ \}$, then $P(E)$	A. \emptyset B. $\{ \}$ C. $\{(2),(4),(6),\dots\}$ D. (\emptyset)
60	The number of subset of $\{0\}$ is	A. 1 B. 2 C. 3 D. None
61	Question Image	A. A is proper subset of B B. A is an improper subset of B C. A is equivalent to B D. B is subset of A
62	A statement which is either true or false is called	A. Induction B. Deduction C. Proposition D. Logic
63	To each element of a group there corresponds _____ inverse element	A. Two B. One C. No D. Three
64	If $\#n = (n-5)^2 + 5$, then find $\#3 \times \#4$.	A. 54 B. 12 C. 4 D. 9
65	If $B-A \neq \emptyset$, then $n(B-A)$ is equal to	A. $n(a)+n(c)$ B. $n(c)-n(a)$ C. $n(a)-n(c)$ D. None of these
66	Question Image	A. Every element of A is in B B. Every element of B is in A C. Every element of A is in B' D. Every element of A is in A
67	$P \notin A$ means	A. $\langle i \rangle P \langle /i \rangle$ is subset of A B. $\langle i \rangle P \langle /i \rangle$ is an element of A C. $\langle i \rangle P$ does not belongs to A D. A does not element of $\langle i \rangle P \langle /i \rangle$
68	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
69	The set of integers is a subset of	A. The set of natural numbers B. The set of whole numbers C. The set of prime numbers D. The set of rational numbers
70	If the intersection of two sets is non-empty, but either is a subset of other are called	A. Disjoint sets B. Overlapping C. Equal sets D. None of these
71	Question Image	A. A B. A' C. U D. A A'
72	The identity elements with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist

73	Question Image	D. None of these
74	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. +-1 D. 0
75	Identity w.r.t intersection in a power set of any set is	A. \emptyset B. Set itself C. Singleton set D. {0}
76	Multiplicative inverse of 0 is	A. 0 B. 1 C. +-1 D. Does not exist
77	Question Image	A. $a \cdot b = ab$ B. $ab = a$ C. $a + b = ab$
78	For a set A, $A \cup A^c =$ -----	A. A B. \emptyset C. A^c D. U
79	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
80	The set (Z, +) forms a group	A. Forms a group w.r.t addition B. Forms a group w.r.t multiplication C. Non commutative group w.r.t multiplication D. Doesn't form a group
81	Question Image	A. $A = C$ B. $A = B$ C. $B = C$ D. None of these
82	Question Image	A. Addition B. Subtraction C. Multiplication D. None of these
83	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
84	If $A=B$, then	A. $A \subset B$ and $B \subset A$ B. $A \subseteq B$ and $B \not\subseteq A$ C. $A \subseteq B$ and $B \subseteq A$ D. None of these
85	A disjunction of two statement p and q is true	A. p is false B. q is false C. Both p and q are false D. One of p and q is true
86	Which conjunction is not true ?	
87	Question Image	
88	Question Image	
89	If $a = \{2m/2m < 9, m \in p\}$, the $(n A) =$	A. {2,3,4,5,6,7,8} B. {2,4,6,8.....16} C. { 4, 6} D. {2,3,5,7}
90	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
91	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
92	The multiplicative inverse of x such that $x \neq 0$ is	A. -x B. does not exist C. $1/x$ D. 0

93	Question Image	A. A B. A' C. U D. None of these
94	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
95	Question Image	A. A B. B C. U D. None of these
96	What is the number of elements of the power set of { }	A. 0 B. 1 C. 2 D. 3
97	Which of the following has the same value as i113	A. i B. -1 C. -i D. 1
98	Which of the following is the subset of all sets?	
99	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
100	The total number of subsets that can be formed out of the set {a, b, c} is	A. 1 B. 4 C. 8 D. 12
101	If $f: A \rightarrow B$ is an injective function and second elements of no two of its ordered pairs are equal, then f is called	A. 1-1 and onto B. Bijective C. 1-1 and into D. None of these
102	Z is the set of integers (\mathbb{Z}) is a group with $a * b = a + b + 1$, $a, b \in \mathbb{Z}$. then inverse of a is	A. -a B. a + 1 C. -1-a D. None of these
103	Question Image	
104	\mathbb{Z} is a group under	A. Subtraction B. Multiplication C. Addition D. None of these
105	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
106	Which of the following sets is infinite	A. The set of students of your class B. The set of all schools in Pakistan C. The set of natural numbers between 3 and 10 D. The set of rational numbers between 3 and 10
107	{1, 2, 3} is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
108	If $x = 1/x$ for $x \in \mathbb{R}$ then the value of x is	A. ± 1 B. 0 C. 2 D. 4
109	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
110	Let A and B be two sets. If every element of A is also an element of B then	
111	Question Image	
112	$G = \{e, a, b, c\}$ 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

113	$A \cup (A \cup B) = \text{-----}$	<p>A. B</p> <p>B. A</p> <p>C. $A \cup B$</p> <p>D. None of these</p>
114	The set of first elements of the ordered pairs in a relation is called its	<p>A. domain</p> <p>B. range</p> <p>C. relation</p> <p>D. function</p>
115	The identity element of a set X with respect to intersection in $P(X)$ is	<p>A. X</p> <p>B. Does not exist</p> <p>C. \emptyset</p> <p>D. None of these</p>
116	Question Image	<p>A. A</p> <p>B. A'</p> <p>C. U</p> <p>D. None of these</p>
117	The set $\{Z \setminus \{0\}\}$ is group w.r.t	<p>A. Addition</p> <p>B. Multiplication</p> <p>C. Division</p> <p>D. Subtraction</p>
118	$A - B = \text{_____}$	
119	If $P = \{x/x = p/q \text{ where } p, q \in Z \text{ and } q \neq 0\}$, then P is the set of	<p>A. Irrational numbers</p> <p>B. Even numbers</p> <p>C. Rational numbers</p> <p>D. Whole numbers</p>
120	Question Image	<p>A. Natural numbers</p> <p>B. Whole numbers</p> <p>C. Integers</p> <p>D. Rational numbers</p>
121	Let A, B, and C be any sets such that $A \cup B = A \cup C$ and $A \cap B = A \cap C$ then	<p>A. $A \neq C$</p> <p>B. $B = C$</p> <p>C. $A = B$</p> <p>D. $A \neq B$</p>
122	Question Image	<p>A. Singleton set</p> <p>B. A set with two points</p> <p>C. Empty set</p> <p>D. None of these</p>
123	Two sets A and B are said to be disjoint if	
124	If $S = \{3, 6, 9, 12, \dots\}$, then	<p>A. S = Four multiples of 3</p> <p>B. S = Set of even numbers</p> <p>C. S = Set of prime numbers</p> <p>D. S = All multiples of 3</p>
125	Which symbolic notation represent unary operation ?	<p>A. -</p> <p>B. \vee</p> <p>C. \wedge</p> <p>D. \Leftrightarrow</p>
126	Question Image	
127	Question Image	
128	Question Image	D. none of these
129	The set which has no proper subset is	<p>A. $\{0\}$</p> <p>B. $\{\}$</p> <p>C. $\{\emptyset\}$</p> <p>D. None of these</p>
130	Power set of difference set N-W is	<p>A. Empty set</p> <p>B. Infinite set</p> <p>C. Singleton set</p> <p>D. $\{0, \emptyset\}$</p>
131	Question Image	<p>A. 4</p> <p>B. 3</p> <p>C. 2</p> <p>D. 1</p>
132	The complement of set A relative to universal set U is the set	
133	The graph of a linear function is	<p>A. a circle</p> <p>B. triangle</p> <p>C. a straight line</p> <p>D. none of these</p>

134	The set $\{Z \setminus \{0\}\}$ is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
135	Question Image	A. A B. B C. A' D. None of these
136	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite
137	If $A = \{2m/m^3 = 8, m \in Z\}$ then $A =$	A. $\{1, 8, 27\}$ B. $\{4\}$ C. $\{2, 4, 6\}$ D. $\{2, 16, 54\}$
138	$\{0\}$ is a	A. Empty set B. Singleton set C. Zero set D. Null Set
139	Φ set is the _____ of all sets	A. Subset B. Union C. Universal D. Intersection
140	Question Image	A. A onto B B. both a & c C. A into B D. none of these
141	In set builder notation the set $\{0, 1, 2, \dots, 100\}$ can be written as	
142	Which of the following sets is finite	A. The set of natural numbers between 3 and 10 B. The set of rational numbers between 3 and 10 C. The set of real numbers between 0 and 1 D. The set of rational numbers between 0 and 1
143	If A is a set then any subset R of $A \times A$ is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
144	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
145	The set of months in a year beginning with S.	A. $\{\text{September, October, November}\}$ B. Singleton set C. Null set D. Empty set
146	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
147	The set $\{x x \in N \wedge x-4=0\}$ in tabular form is	A. $\{-4\}$ B. $\{0\}$ C. $\{\}$ D. None of these
148	Question Image	A. A B. A' C. U D. U'
149	The sets $\{1, 2, 4\}$ and $\{4, 6, 8, 10\}$ are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Over lapping sets
150	The set of complex numbers forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Subtraction
151	The multiplicative inverse of x such that $x = 0$ is	A. -x B. Does not exist C. $1/x$ D. ± 1

152	Question Image	
153	Group of none-singular matrices under multiplication is	<p>A. None-Abelian group</p> <p>B. Semi group</p> <p>C. Abelian group</p> <p>D. None of these</p>
154	Question Image	
155	The set $\{-1, 1\}$ is	<p>A. Group under the multiplication</p> <p>B. Group under addition</p> <p>C. Does not form a group</p> <p>D. Contains no identity element</p>
156	If A and B are two sets then intersection of A and B is denoted by	
157	If a 1-1 correspondence can be established b/w two sets A and B, then they are called	<p>A. Equal sets</p> <p>B. Equivalent sets</p> <p>C. Over lapping sets</p> <p>D. None of these</p>
158	For any set B, $B \cup B'$ is	<p>A. Is set B</p> <p>B. Set B'</p> <p>C. Universal set</p> <p>D. None of these</p>
159	If $A = \{x/x \text{ is a positive integer and } 4 \leq x < 23\}$, then $A =$	<p>A. $\{1, 2, 3, 4, 5, 6, 7\}$</p> <p>B. $\{4, 5, 6, \dots, 22\}$</p> <p>C. $\{1, 2, 3, \dots, 23\}$</p> <p>D. $\{1, 2, 3, 4, 5\}$</p>
160	If P is a proposition then its negative is denoted by	
161	The number of proper subset of $A = \{a, b, c, d\}$ is	<p>A. 3</p> <p>B. 6</p> <p>C. 8</p> <p>D. 15</p>
162	The extraction of cube root of a given number is a	<p>A. Unary Operation</p> <p>B. Binary Operation</p> <p>C. Relation</p> <p>D. None of these</p>
163	The set of real numbers is a subset of	<p>A. The set of natural numbers</p> <p>B. The set of rational numbers</p> <p>C. The set of integers</p> <p>D. The set of complex numbers</p>
164	$\{x : x \in \mathbb{Z} \text{ and } x < 1\}$ is	<p>A. Singleton set</p> <p>B. A set with two points</p> <p>C. Empty set</p> <p>D. None of these</p>
165	Write down the power set of $\{9, 11\}$	
166	The many subset can be formed from the set $\{a, b, c, d\}$	<p>A. 8</p> <p>B. 4</p> <p>C. 12</p> <p>D. 16</p>
167	The set of the first elements of the ordered pairs forming a relation is called its	<p>A. Function on B</p> <p>B. Range</p> <p>C. Domain</p> <p>D. A into B</p>
168	If A and B are two sets then any subset R of $B \times A$ is called	<p>A. relation on A</p> <p>B. relation on B</p> <p>C. relation from A to B</p> <p>D. relation from B to A</p>
169	Question Image	
170	The multiplicative inverse of -1 in the set $\{1, -1\}$ is	<p>A. 1</p> <p>B. -1</p> <p>C. ± 1</p> <p>D. 0</p> <p>E. Does not exist</p>
171	The set $\{\{a, b\}\}$ is	<p>A. Infinite set</p> <p>B. Singleton set</p> <p>C. Two points set</p> <p>D. None</p>
172	\emptyset is a symbol of	<p>A. singleton set</p> <p>B. Empty set</p>

172	is a symbol of	C. Equivalent set D. Infinite set
173	The set $\{ \{a,b\} \}$ is	A. Infinite set B. Singleton set C. Two points set D. Empty set
174	$A = B$ iff	A. All elements of A also the elements of B B. A and B should be singleton C. A and B have the same number of elements D. If both have the same element
175	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 $X \cup Y = 54$, then number of elements in set $X \cap Y =$	A. 4 B. 3 C. 2 D. 1
176	The graph of a quadratic function is	A. Circle B. Straight line C. Parabola D. Triangle
177	Question Image	
178	The logic in which every statement is regarded as true or false and no other possibility is called	A. Aristotelian logic B. Inductive logic C. Non-Aristotelian logic D. None of these
179	The set $\{-1, 1\}$ is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
180	Z is the set of integers, $(Z, *)$ is a group with $a * b = a + b + 1$, $a, b \in G$. then inverse of a is	A. -a B. $a + 1$ C. $-2 - a$ D. None of these
181	If $B = \{x \in Z \mid -3 < x < 6\}$, then $n(B) =$	A. 5 B. $\{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$ C. 8 D. 9
182	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
183	Question Image	
184	A conditional is regarded as false only when the antecedent is true and consequent is	A. True B. False C. Known D. Unknown
185	The set of the first elements of the orders pairs forming a relations is called its	A. Relation in B B. Range C. Domain D. Relation in A
186	A function in which the second elements of the order pairs are distinct is called	A. Onto function B. One-one function C. Identity function D. Inverse function
187	Question Image	
188	Question Image	
189	Question Image	
190	Question Image	

A. $\{a\}$
B. $\langle p \text{ class="MsoNormal"><!--[if gte msEquation 12]><m:oMathPara><m:oMath><i style="mso-bidi-font-style:normal"><m:r></m:r></i></m:oMath></m:oMathPara><![endif]><!--[if !msEquation]><!--<!--[if gte vml 1]><v:shapetype id="_x0000_t75" coordsize="21600,21600" o:spt="75" o:preferrelative="t" path="m@4@5l@4@11@9@11@9@5xe" filled="f" stroked="f"> <v:stroke joinstyle="miter"> <v:formulas> <v:f eqn="if lineDrawn pixelLineWidth 0"/> <v:f eqn="sum @0 1 0"/> <v:f eqn="sum 0 0 @1"/> <v:f eqn="prod @2 1 2"/> <v:f eqn="prod @3 21600 pixelWidth"/> <v:f eqn="prod @3 21600 pixelHeight"/> <v:f eqn="sum @0 0 1"/> <v:f eqn="prod @6 1 2"/> <v:f eqn="prod @7 21600$

191	If $D = \{a\}$, the $P(D) =$	<p>pixelWidth"/> <v:f eqn="sum @8 21600 0"/> <v:f eqn="prod @7 21600 pixelHeight"/> <v:f eqn="sum @10 21600 0"/> </v:formulas> <v:path o:extrusionok="f" gradientshapeok="t" o:connecttype="rect"/> <o:lock v:ext="edit" aspectratio="t"/> </v:shapetype><v:shape id="_x0000_i1025" type="#_x0000_t75" style="width:6.75pt; height:14.25pt"> <v:imagedata src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image001.png" o:title="" chromakey="white"/> </v:shape><![endif]--><!--[if !vml]--><!-- [endif]--><!--[endif]--><o:p></o:p></p> C. $\{\emptyset, \{a\}\}$ D. $\{\emptyset, a\}$</p>
192	If $C = \{p/p < 18, p \text{ is a prime number}\}$, then $C =$	<p>A. $\{2, 3, 4, \dots, 17\}$ B. $\{2, 4, 6, 8, \dots, 16\}$ C. $\{1, 3, 5, 7, 9, 11, 13, 15, 17\}$ D. $\{3, 6, 9, 12, 15\}$</p>
193	If $A \subseteq B$, and B is a finite set, then	<p>A. $n(A) \leq n(B)$ B. $n(B) \leq n(A)$ C. $n(A) \leq n(B)$ D. $n(A) \geq n(B)$</p>
194	$G = \{e, a, b, c\}$ is an Abelian group with e as identity element. The order of the other elements are	<p>A. 2, 2, 2 B. 3, 3, 3 C. 2, 2, 4 D. 2, 3, 4</p>
195	If p and q are two statements then their conjunction is denoted by	
196	The set X is	<p>A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these</p>
197	The set of integer is	<p>A. Finite group B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group</p>
198	The function $f\{(x, y) \mid y = ax^2 + bx + c\}$ is	<p>A. One-one function B. Constant function C. Onto function D. Quadratic function</p>
199	If p and q are two statements then their biconditional ' p if q ' is denoted by	
200	Question Image	
201	The set of the first elements of the orders pairs forming a relation is called its	<p>A. Relation in B B. Range C. Domain D. Relation In A</p>
202	The set $\{1, -1, i, -i\}$ form a group under	<p>A. Addition B. Multiplication C. Subtraction D. None</p>
203	The function $f\{(x, y) \mid y = ax^2 + bx + c\}$ is	<p>A. One-one function B. Constant function C. Onto function D. Quadratic function</p>
204	The negation of a number	<p>A. a relation B. a function C. unary operation D. binary operation</p>
205	If $n(A) = n$ then $n(P(A))$ is	<p>A. $2n$ B. $n^{2/2}$ C. $n/2$ D. $2^{n/2}$</p>
206	The number of subsets of a set having three elements is	<p>A. 4 B. 6 C. 8 D. none of these</p>
207	Question Image	
208	The set of whole numbers is subset of	<p>A. The set on integers B. The set of natural numbers C. $\{1, 3, 5, 7, \dots\}$ D. The set of prime numbers</p>

209	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
210	Question Image	A. 1 B. 12 C. 5 D. 29
211	Question Image	B. A C. A' D. U
212	The set $\{\{a,b\}\}$ is	A. Infinite set B. Singleton set C. Two points set D. None
213	The set R isw.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
214	Question Image	D. none of these
215	Question Image	A. A B. B C. A'B' D. B'A
216	If $A \subseteq B$ then $A \cup B$ is	A. A B. B C. A' D. $A \cap B$
217	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
218	if $A = \{x/x \in \mathbb{Q} \wedge 0 < x < 1\}$, the A is	A. Infinite set B. Finite set C. Set of rational numbers D. Set of real numbers
219	In a school, there are 150 students. Out of these 80 students enrolled for mathematics class, 50 enrolled for English class, and 60 enrolled for Physics class. The students enrolled for English cannot any other class, but the students of mathematics and Physics can take two courses at a time. Find the number of students who have taken both physics and mathematics	A. 40 B. 30 C. 50 D. 20
220	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
221	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
222	Given X,Y are any two sets such that number of elements in X = 18, number of elements in set Y = 24, and number of elements in set $X \cup Y$ = 40, then number of elements in set $x \cap Y$ =	A. 3 B. 1 C. 2 D. 4
223	To each element of a group there corresponds inverse element	A. Two B. One C. No D. Three
224	Question Image	
225	Let A,B and C be any sets such that $A \cup B = A \cup C$ and $A \cap B = A \cap C$ then	A. $A = B$ B. $B = C$ C. $A \neq C$ D. $A \neq B$
226	If A and B are two sets then any subset R of $A \times B$ is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A

227	If there is one-one correspondence between A and B, then we write.	A. $A = B$ B. $A \subseteq B$ C. $A \supseteq B$ D. $A \sim B$
228	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
229	For any set X, $X \cup X$ is	A. X B. X' C. Φ D. Universal Set
230	Question Image	D. None of these
231	The set $\{x + iy / x, y \in \mathbb{Q}\}$ forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Both addition and multiplication
232	Empty set is	A. Not subset of every set B. Finite set C. Infinite set D. Not the member of real numbers
233	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
234	$\{1, 2, 3, 4, \dots\}$ is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
235	If $T = \{2, 4, 6, 8, 10, 12\}$, then	A. $T =$ (First six natural numbers) B. $T =$ (First six odd numbers) C. $T =$ (First six real numbers) D. $T =$ (First six even numbers)
236	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
237	Every set is an improper subset of	A. Empty set B. Equivalent set C. Itself D. Singleton set
238	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. None of these
239	The set $\{-1, 1\}$ is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
240	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
241	Question Image	
242	Question Image	A. $n(A)$ B. $n(B)$ C. 0 D. 1
243	Question Image	
244	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
245	Φ set is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection

A. Forms a group

246	Power set of X i.e $P(X)$ _____ under the binary operation of union \cup	B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
247	Question Image	A. square root function B. identity function C. linear function D. quadratic function
248	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
249	If $A \cap B = B$, then $n(A \cap B)$ is equal to	A. $n(a)$ B. $n(a) + n(c)$ C. $n(c)$ D. None of these
250	$\{x x \in R \wedge x \neq x\}$ is a	A. Infinite set B. Null set C. Finite set D. None of these