

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








Sr	Questions	Answers Choice
1	If a 1-1 correspondence can be established b/w two sets A and B, then they are called	A. Equal sets B. Equivalent sets C. Over lapping sets D. None of these
2	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
3	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	A. Improper subset of B B. Super set of B C. Proper subset of B D. None of these
4	$\{x x \in R \wedge x \neq x\}$ is a	A. Infinite set B. Null set C. Finite set D. None of these
5	The set $\{x x \in N \wedge x-4=0\}$ in tabular form is	A. $\{-4\}$ B. $\{0\}$ C. $\{\}$ D. None of these
6	The set which has no proper subset is	A. $\{0\}$ B. $\{\}$ C. $\{\emptyset\}$ D. None of these
7	If the intersection of two sets is non-empty, but either is a subset of other are called	A. Disjoint sets B. Over lapping C. Equal sets D. None of these
8	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
9	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
10	The logic in which every statement is regarded as true or false and no other possibility is called	A. Aristotelian login B. Inductive logic C. Non-Aristotelian logic D. None of these
11	The contra positive of $p \rightarrow q$ is	A. $q \rightarrow p$ B. $\sim q \rightarrow \sim q$ C. $\sim p \rightarrow \sim q$ D. None of these
12	Onto function is also called	A. Binjective function B. Injective function C. Surjective function D. None of these
13	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
14	Question Image	D. None of these
15	Question Image	A. Addition B. Subtraction C. Multiplication D. None of these
16	The geometrical representation of a linear function is	A. Circle B. Parabola C. Straight lie D. None of these

		D. None of these
17	A monoid $(G, *)$ is said to be group if	A. have identity element B. is commutative C. have inverse of each element D. None of these
18	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
19	Question Image	D. None of these
20	The function whose range consists of just one element is called	A. One-One Function B. Identity Function C. Onto Function D. Constant Function
21	The set X is	A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these
22	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
23	If $B \subseteq A$, then complement of B in A is = -----	A. A-B B. $A \cap B$ C. B-A D. $A \cup B$
24	$(A \cup B) \cup C =$ -----	A. $A \cap B(B \cup C)$ B. $A \cup (B \cup C)$ C. $A \cup (B \cap C)$ D. None of these
25	$A \cup (A \cap B) =$ -----	A. B B. A C. $A \cup B$ D. None of these
26	For a set A, $A \cup A^c =$ -----	A. A B. \emptyset C. A^c D. U
27	$(A \cap B)^c =$ -----	A. $A^c \cup B^c$ B. $A^c \cup B$ C. $A^c \cap B$ D. None of these
28	A conjunction of two statement p and q is true only if	A. p is true B. q is true C. Both p and q are true D. both p and q are false
29	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
30	A conditional is regarded as false only when the antecedent is true and consequent is	A. True B. False C. Known D. Unknown
31	The negation of given number is a	A. Binary operation B. Unary operation C. Relation D. None of these
32	The extraction of cube root of a given number is a	A. Unary Operation B. Binary Operation C. Relation D. None of these
33	The identity element of a set X with respect to intersection in $P(X)$ is	A. X B. Does not exist C. \emptyset D. None of these
34	Z is a group under	A. Subtraction B. Multiplication C. Addition D. None of these

35	Group of none-singular matrices under multiplication is	A. None-Abelian group B. Semi group C. Abelian group D. None of these
36	Question Image	A. $a-b=ab$ B. $ab=a$ C. $a+b=ab$
37	Question Image	A. A onto B B. both a & c C. A into B D. none of these
38	Power set of difference set N-W is	A. Empty set B. Infinite set C. Singleton set D. $\{0, \emptyset\}$
39	Which conjunction is not true ?	
40	Which symbolic notation represent unary operation ?	A. - B. \vee C. \wedge D. \leftrightarrow
41	Identity w.r.t intersection in a power set of any set is	A. \emptyset B. Set itself C. Singleton set D. $\{0\}$
42	Under multiplication, solution set of is	A. Groupoid B. Abelian group C. Semi group D. All of these
43	If $z_1 = 2 + 6i$ and $z_2 = 3 + 7i$ then which expression defines the product of z_1 and z_2	A. $36 + (-32)i$ B. $-36 + 32i$ C. $6 + (-11)i$ D. $0, +(-12)i$
44	Which of the following has the same value as i^{113}	A. i B. -1 C. $-i$ D. 1
45	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. $-1 - a$ D. None of these
46	$G = \{e, a, b, c\}$ 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
47	For any set X , $X \cup X$ is	A. X B. X' C. Φ D. Universal Set
48	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
49	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. $A \neq C$ B. $B = C$ C. $A = B$ D. $A \neq B$
50	The complement of set A relative to universal set U is the set	A. $\{x / x \in A \wedge x \in U\}$ B. $\{x / x \notin A \wedge x \in U\}$ C. $\{x / x \in A \text{ and } x \notin U\}$ D. $A - U$
51	The multiplicative inverse of x such that $x = 0$ is	A. $-x$ B. Does not exist C. $1/x$ D. ± 1
52	Which of the following is the subset of all sets	A. Φ B. $\{1, 2, 3\}$ C. $\{\Phi\}$ D. $\{0\}$
		A. Infinite set B. Singleton set

53	The set $\{\{a,b\}\}$ is	B. Singleton set C. Two points set D. None
54	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
55	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
56	The multiplicative inverse of -1 in the set $\{1,-1\}$ is	A. 1 B. -1 C. ± 1 D. 0 E. Does not exist
57	The set $\{1,-1, i, -i\}$ form a group under	A. Addition B. Multiplication C. Subtraction D. None
58	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
59	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
60	The set Q	A. Forms a group under addition B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
61	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
62	For any set B, $B \cup B'$ is	A. Is set B B. Set B' C. Universal set
63	If $A \subseteq B$ then $A \cup B$ is	A. A B. B C. A' D. $A \cap B$
64	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
65	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
66	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. $A \neq B$
67	If $x = 1/x$ for $x \in \mathbb{R}$ then the value of x is	A. ± 1 B. 0 C. 2 D. 4
68	The set $\{-1,1\}$ is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
69	Φ set is the _____ of all sets	A. Subset B. Union C. Universal D. Intersection
70	$\{x : x \in \mathbb{Z} \text{ and } x < 1\}$ is	A. Singleton set B. A set with two points C. Empty set D. None of these

71	The set $\{ \{a,b\} \}$ is	A. Infinite set B. Singleton set C. Two points set D. Empty set
72	$(A \cap B)^c =$	A. $A \cap B$ B. $(A \cup B)^c$ C. $A^c \cup B^c$ D. Φ
73	The set of the first elements of the orders pairs forming a relation is called its	A. Relation in B B. Range C. Domain D. Relation In A
74	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
75	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
76	The function $\{f(x,y) y = ax^2 + bx + c\}$ is	A. One-one function B. Constant function C. Onto function D. Quadratic function
77	To each element of a group there corresponds inverse element	A. Two B. One C. No D. Three
78	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
79	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
80	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
81	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
82	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
83	The set \mathbb{R} isw.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
84	The set $\{\mathbb{Z} \setminus \{0\}\}$ is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
85	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
86	The set $(\mathbb{Z}, +)$ 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
87	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
88	$\{1, 2, 3, 4, \dots\}$ is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers



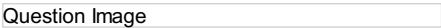
89		A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
90		A. Every element of A is in B B. Every element of B is in A C. Every element of A is in B' D. Every element of A is in A
91	Let A and B be two sets. If every element of A is also an element of B then	
92	The set of natural numbers is a subset of	A. {1, 2, 3, ..., 100} B. The set of whole numbers C. {2, 4, 6, 8, ...} D. None of these
93	The set of whole numbers is subset of	A. The set of integers B. The set of natural numbers C. {1, 3, 5, 7, ...} D. The set of prime numbers
94	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
95	The set of real numbers is a subset of	A. The set of natural numbers B. The set of rational numbers C. The set of integers D. The set of complex numbers
96	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
97	{1, 2, 3} is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
98	$A = B$ if	D. A is equivalent to B
99		A. An empty set B. Universal set C. A singleton set D. None of these
100		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
101		A. An empty set B. Universal set C. A singleton set D. None of these
102		A. A finite set B. An infinite set C. An empty set D. None of these
103	The sets {1, 2, 4} and {4, 6, 8, 10} are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Overlapping sets
104	$A - B =$ _____	
105	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
106	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
107	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
108		

109	If $n(A) = n$ then $n(P(A))$ is	A. $2n$ B. $n^{2/2}$ C. $n/2$ D. $2^{n/2}$
110	What is the number of elements of the power set of $\{0, 1\}$	A. 1 B. 2 C. 3 D. 4
111	What is the number of elements of the power set of $\{\}$	A. 0 B. 1 C. 2 D. 3
112	Write down the power set of $\{9, 11\}$	
113	If A and B are two sets then intersection of A and B is denoted by	
114	Two sets A and B are said to be disjoint if	
115	Question Image	
116	Question Image	
117	Question Image	
118	Question Image	
119	Question Image	
120	Question Image	
121	Question Image	
122	Question Image	
123	Question Image	
124	Question Image	A. A B. B C. $A \cap B'$ D. $B \cap A$
125	Question Image	
126	Question Image	
127	Question Image	A. A B. A' C. U D. $A \cap A'$
128	Question Image	B. A C. A' D. U
129	Question Image	A. A B. A' C. U D. U'
130	Question Image	A. A B. A' C. U D. None of these
131	Question Image	A. $n(A)$ B. $n(B)$ C. 0 D. 1
132	Question Image	A. A B. B C. U D. None of these
133	Question Image	A. A B. B C. U D. None of these
134	Question Image	A. A B. A'

134	Question Image	C. U D. None of these
135	A statement which is either true or false is called	A. Induction B. Deduction C. Proposition D. Logic
136	If P is a proposition then its negative is denoted by	
137	If p and q are two statements then their conjunction is denoted by	
138	A conditional "if p then q" is denoted by	
139	If p and q are two statements then their biconditional 'p if q' is denoted by	
140	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
141	Question Image	A. Conclusion B. Implication C. Antecedent D. Hypothesis
142	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
143	Question Image	
144	Question Image	
145	Question Image	
146	The number of subsets of a set having three elements is	A. 4 B. 6 C. 8 D. none of these
147	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
148	If A and B are two sets then any subset R of $B \times A$ is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
149	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
150	The set of first elements of the ordered pairs in a relation is called its	A. domain B. range C. relation D. function
151	Question Image	
152	Question Image	
153	Question Image	
154	Question Image	
155	Question Image	
156	Question Image	A. a constant function B. linear function C. quadratic function D. none of these
157	The graph of a linear function is	A. a circle B. triangle C. a straight line D. none of these
158	Question Image	A. square root function B. identity function

158	Question Image	<div> <div></div> <div> <p> A. identity function B. linear function C. linear function D. quadratic function </p> </div> </div>
159	Question Image	<div> <div></div> <div> <p>D. none of these</p> </div> </div>
160	The negation of a number	<div> <div></div> <div> <p> A. a relation B. a function C. unary operation D. binary operation </p> </div> </div>
161	Question Image	<div> <div></div> <div> <p>D. none of these</p> </div> </div>
162	Question Image	<div> <div></div> <div></div> </div>
163	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	<div> <div></div> <div> <p> A. -a B. a + 1 C. -2 -a D. None of these </p> </div> </div>
164	$G = \{e, a, b, c\}$ is an Abelian group with e as identity element. The order of the other elements are	<div> <div></div> <div> <p> A. 2, 2, 2 B. 3, 3, 3 C. 2, 2, 4 D. 2, 3, 4 </p> </div> </div>
165	Question Image	<div> <div></div> <div></div> </div>
166	Question Image	<div> <div></div> <div> <p> A. 4 B. 3 C. 2 D. 1 </p> </div> </div>
167	Question Image	<div> <div></div> <div> <p> A. A = C B. A = B C. B = C D. None of these </p> </div> </div>
168	The complement of set A relative to universal set U is the set	<div> <div></div> <div></div> </div>
169	The multiplicative inverse of x such that $x \neq 0$ is	<div> <div></div> <div> <p> A. -x B. does not exist C. 1/x D. 0 </p> </div> </div>
170	Multiplicative inverse of "1" is	<div> <div></div> <div> <p> A. 0 B. -1 C. 1 D. {0, 1} </p> </div> </div>
171	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	<div> <div></div> <div> <p> A. 40 B. 30 C. 50 D. 20 </p> </div> </div>
172	Which of the following is the subset of all sets?	<div> <div></div> <div></div> </div>
173	The set $\{\{a,b\}\}$ is	<div> <div></div> <div> <p> A. Infinite set B. Singleton set C. Two points set D. None </p> </div> </div>
174	The set of the first elements of the ordered pairs forming a relation is called its	<div> <div></div> <div> <p> A. Function on B B. Range C. Domain D. A into B </p> </div> </div>
175	The graph of a quadratic function is	<div> <div></div> <div> <p> A. Circle B. Ellipse C. Parabola D. Hexagon </p> </div> </div>
176	The set of complex numbers forms a group under the binary operation of	<div> <div></div> <div> <p> A. Addition B. Multiplication C. Division D. Subtraction </p> </div> </div>
177	The multiplicative inverse of -1 in the set $\{1, -1\}$ is	<div> <div></div> <div> <p> A. 1 B. -1 C. 0 D. Does not exist </p> </div> </div>
		<div> <div></div> <div> <p> A. Addition B. Subtraction C. Multiplication D. Division </p> </div> </div>

178	The set $\{1, -1, 1, -1\}$, form a group under	B. Multiplication C. Subtraction D. None
179	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
180	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
181	The set $(Q, .)$	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
182	The set $(Z, +)$ 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
183	For any set B, $B \cup B'$ is	A. Is set B B. Set B' C. Universal set D. None of these
184	Question Image	A. A B. B C. A' D. None of these
185	In set builder notation the set $\{0, 1, 2, \dots, 100\}$ can be written as	
186	Question Image	A. 3 B. 1 C. 2 D. 4
187	Question Image	A. 1 B. 12 C. 5 D. 29
188	Question Image	A. $A = B$ B. $B = C$ C. $A = C$ D. None of these
189	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
190	Question Image	
191	The set $\{-1, 1\}$ is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
192	Multiplicative inverse of "1" is	A. ± 1 B. 0 C. 1 D. None of these
193	If a set S contains "n" elements then $P(S)$ has number of elements	A. $2^{ⁿ}$ B. $2^{²ⁿ}$ C. $2 \cdot n$ D. $n^{²}$
194	Additive inverse of $-a - b$ is	A. a B. $-a + b$ C. $a - b$ D. $a + b$
195	Question Image	A. $1/x$ B. $-x$ C. $2x$ D. $0.5x$
196	Question Image	A. $-x$ B. Infinite set C. $\{-4, 4\}$ D. None of these

197	The identity elements with respect to subtraction is	<p>A. 0</p> <p>B. 1</p> <p>C. -1</p> <p>D. Does not exist</p>
198	Multiplicative inverse of 0 is	<p>A. 0</p> <p>B. 1</p> <p>C. +1</p> <p>D. Does not exist</p>
199	Decimal part of irrational number is	<p>A. Terminating</p> <p>B. Repeating only</p> <p>C. Neither repeating nor terminating</p> <p>D. Repeating and terminating</p>
200	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.	<p>A. 45</p> <p>B. 30</p> <p>C. 25</p> <p>D. 50</p>
201	Φ set is the _____ of all sets?	<p>A. Subset</p> <p>B. Union</p> <p>C. Universal</p> <p>D. Intersection</p>
202		<p>A. Singleton set</p> <p>B. A set with two points</p> <p>C. Empty set</p> <p>D. None of these</p>
203	The set $\{ \{a, b\} \}$ is	<p>A. Infinite set</p> <p>B. Singleton set</p> <p>C. Two points set</p> <p>D. Empty set</p>
204		
205	If $\#n = (n-5)^2 + 5$, then find $\#3 \times \#4$.	<p>A. 54</p> <p>B. 12</p> <p>C. 4</p> <p>D. 9</p>
206	The set of the first elements of the orders pairs forming a relations is called its	<p>A. Relation in B</p> <p>B. Range</p> <p>C. Domain</p> <p>D. Relation in A</p>
207	A function whose range is just one elements is called	<p>A. One-one function</p> <p>B. Constant function</p> <p>C. Onto function</p> <p>D. Identity function</p>
208	The graph of a quadratic function is	<p>A. Circle</p> <p>B. Straight line</p> <p>C. Parabola</p> <p>D. Triangle</p>
209	The function $f\{(x, y) \mid y = ax^2 + bx + c\}$ is	<p>A. One-one function</p> <p>B. Constant function</p> <p>C. Onto function</p> <p>D. Quadratic function</p>
210	To each element of a group there corresponds _____ inverse element	<p>A. Two</p> <p>B. One</p> <p>C. No</p> <p>D. Three</p>
211	The set of integer is	<p>A. Finite group</p> <p>B. A group w.r.t addition</p> <p>C. A group w.r.t multiplication</p> <p>D. Not a group</p>
212		<p>A. Addition</p> <p>B. Multiplication</p> <p>C. Division</p> <p>D. Both addition and multiplication</p>
213	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>
214	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>

A. Commutative group w.r.t addition
B. Commutative group w.r.t multiplication

215	The set of complex numbers forms	B. Commutative group w.r.t multiplication C. Commutative group w.r.t division D. Non commutative group w.r.t addition
216	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
217	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
218	The set $\{Z \setminus \{0\}\}$ is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
219	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
220	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
221	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
222	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)
223	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
224	If $S = \{3, 6, 9, 12, \dots\}$, then	A. $S =$ Four multiples of 3 B. $S =$ Set of even numbers C. $S =$ Set of prime numbers D. $S =$ All multiples of 3
225	If $P = \{x/x = p/q \text{ where } p, q \in Z \text{ and } q \neq 0\}$, then P is the set of	A. Irrational numbers B. Even numbers C. Rational numbers D. Whole numbers
226	$A = B$ 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
227	The set of months in a year beginning with S .	A. $\{\text{September, October, November}\}$ B. Singleton set C. Null set D. Empty set
228	$P \notin A$ 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 $A \langle /i \rangle$ D. A does not element of $\langle i \rangle P \langle /i \rangle$
229	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. $A \sim B$
230	if $A = \{x/x \in Q \wedge 0 < x < 1\}$, the A is	A. Infinite set B. Finite set C. Set of rational numbers D. Set of real numbers
231	Empty set is	A. Not subset of every set B. Finite set C. Infinite set D. Not the member of real numbers
232	Every set is an improper subset of	A. Empty set B. Equivalent set C. Itself D. Singleton set

233	$\{0\}$ is a	<p>A. Empty set B. Singleton set C. Zero set D. Null Set</p>
234	Z is a	<p>A. Infinite set B. Finite set C. Singleton set D. Set of all integers</p>
235	If $A = \{x/x \text{ is a positive integer and } 4 \leq x < 23\}$, then $A =$	<p>A. $\{1, 2, 3, 4, 5, 6, 7\}$ B. $\{4, 5, 6, \dots, 22\}$ C. $\{1, 2, 3, \dots, 23\}$ D. $\{1, 2, 3, 4, 5\}$</p>
236	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>
237	If $a = \{2m/2m < 9, m \in p\}$, the $(n A) =$	<p>A. $\{2, 3, 4, 5, 6, 7, 8\}$ B. $\{2, 4, 6, 8, \dots, 16\}$ C. $\{4, 6\}$ D. $\{2, 3, 5, 7\}$</p>
238	If $B = \{x/x \in Z^+ - 3 < x < 6\}$, then $n(B) =$	<p>A. 5 B. $\{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$ C. 8 D. 9</p>
239	If $O = \{1, 3, 5, \dots\}$, then $n(O) =$	<p>A. Infinite B. Even numbers C. odd integers D. 99</p>
240	If $A = \{2m/m^3 = 8, m \in Z\}$ then $A =$	<p>A. $\{1, 8, 27\}$ B. $\{4\}$ C. $\{2, 4, 6\}$ D. $\{2, 16, 54\}$</p>
241	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>
242	The set of even prime numbers is	<p>A. $\{2, 4, 6, 8, 10\}$ B. $\{2, 4, 6, 8, 10, 12\}$ C. $\{1, 3, 5, 7, 9\}$ D. $\{2\}$</p>
243	If $D = \{a\}$, the $P(D) =$	<p>A. $\{a\}$ B. $\{\emptyset\}$ C. $\{\emptyset, \{a\}\}$ D. $\{\emptyset, a\}$</p>
244	If $E = \{\}$, then $P(E)$	<p>A. \emptyset B. $\{\}$ C. $\{(2), (4), (6), \dots\}$ D. $\{\emptyset\}$</p>
245	The number of subset of $\{0\}$ is	<p>A. 1 B. 2 C. 3 D. None</p>
246	The many subset can be formed from the set $\{a, b, c, d\}$	<p>A. 8 B. 4 C. 12</p>

D. 16

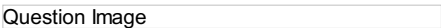





247	The number of proper subset of $A = \{a, b, c, d\}$ is	A. 3 B. 6 C. 8 D. 15
248	The number of subsets of $B = \{1, 2, 3, 4, 5\}$	A. 10 B. 32 C. 16 D. 5
249	0 is a symbol of	A. singleton set B. Empty set C. Equivalent set D. Infinite set
250	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite
251	If a 1-1 correspondence can be established b/w two sets A and B, then they are called	A. Equal sets B. Equivalent sets C. Overlapping sets D. None of these
252	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
253	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	A. Improper subset of B B. Super set of B C. Proper subset of B D. None of these
254	$\{x x \in R \wedge x \neq x\}$ is a	A. Infinite set B. Null set C. Finite set D. None of these
255	The set $\{x x \in N \wedge x - 4 = 0\}$ in tabular form is	A. $\{-4\}$ B. $\{0\}$ C. $\{\}$ D. None of these
256	The set which has no proper subset is	A. $\{0\}$ B. $\{\}$ C. $\{\emptyset\}$ D. None of these
257	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
258	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
259	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
260	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
261	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
262	Onto function is also called	A. Bijective function B. Injective function C. Surjective function D. None of these
263	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
264	Question Image	D. None of these

265	Question Image	A. Addition B. Subtraction C. Multiplication D. None of these
266	The geometrical representation of a linear function is	A. Circle B. Parabola C. Straight line D. None of these
267	A monoid $(G, *)$ is said to be group if	A. have identity element B. is commutative C. have inverse of each element D. None of these
268	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
269	Question Image	D. None of these
270	The function whose range consists of just one element is called	A. One-One Function B. Identity Function C. Onto Function D. Constant Function
271	The set X is	A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these
272	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
273	If $B \subseteq A$, then complement of B in A is = ----- -----	A. $A-B$ B. $A \cap B$ C. $B-A$ D. $A \cup B$
274	$(A \cup B) \cup C =$ -----	A. $A \cap B (B \cup C)$ B. $A \cup (B \cup C)$ C. $A \cup (B \cap C)$ D. None of these
275	$A \cup (A \cap B) =$ -----	A. B B. A C. $A \cup B$ D. None of these
276	For a set A, $A \cup A^c =$ -----	A. A B. \emptyset C. A^c D. U
277	$(A \cap B)^c =$ -----	A. $A^c \cup B^c$ B. $A^c \cup B$ C. $A^c \cap B$ D. None of these
278	A conjunction of two statement p and q is true only if	A. p is true B. q is true C. Both p and q are true D. both p and q are false
279	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
280	A conditional is regarded as false only when the antecedent is true and consequent is	A. True B. False C. Known D. Unknown
281	The negation of given number is a	A. Binary operation B. Unary operation C. Relation D. None of these
282	The extraction of cube root of a given number is a	A. Unary Operation B. Binary Operation C. Relation D. None of these

283	The identity element of a set X with respect to intersection in $P(X)$ is	<p>A. \wedge</p> <p>B. Does not exist</p> <p>C. \emptyset</p> <p>D. None of these</p>
284	Z is a group under	<p>A. Subtraction</p> <p>B. Multiplication</p> <p>C. Addition</p> <p>D. None of these</p>
285	Group of non-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>
286	Question Image	<p>A. $a-b=ab$</p> <p>B. $ab=a$</p> <p>C. $a+b=ab$</p>
287	Question Image	<p>A. A onto B</p> <p>B. both a & c</p> <p>C. A into B</p> <p>D. none of these</p>
288	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>
289	Which conjunction is not true ?	
290	Which symbolic notation represent unary operation ?	<p>A. -</p> <p>B. \vee</p> <p>C. \wedge</p> <p>D. \leftrightarrow</p>
291	Identity w.r.t intersection in a power set of any set is	<p>A. \emptyset</p> <p>B. Set itself</p> <p>C. Singleton set</p> <p>D. $\{0\}$</p>
292	Under multiplication, solution set of is	<p>A. Groupoid</p> <p>B. Abelian group</p> <p>C. Semi group</p> <p>D. All of these</p>
293	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>
294	Which of the following has the same value as i^{113}	<p>A. i</p> <p>B. -1</p> <p>C. -i</p> <p>D. 1</p>
295	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	<p>A. -a</p> <p>B. $a + 1$</p> <p>C. $-1 - a$</p> <p>D. None of these</p>
296	$G = \{e, a, b, c\}$ is an Abelian group with e as identity element The order of the other elements are	<p>A. 2, 2, 2</p> <p>B. 3, 3, 3</p> <p>C. 2, 2, 4</p> <p>D. 2, 3, 4</p>
297	For any set X, $X \cup X$ is	<p>A. X</p> <p>B. X'</p> <p>C. ϕ</p> <p>D. Universal Set</p>
298	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 $X \cap Y =$	<p>A. 4</p> <p>B. 3</p> <p>C. 2</p> <p>D. 1</p>
299	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>
300	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>
301	The multiplicative inverse of x such that $x = 0$ is	<p>A. -x</p> <p>B. Does not exist</p> <p>C. $1/x$</p>

		D. ± 1
302	Which of the following is the subset of all sets	A. Φ B. $\{1,2,3\}$ C. $\{\Phi\}$ D. $\{0\}$
303	The set $\{\{a,b\}\}$ is	A. Infinite set B. Singleton set C. Two points set D. None
304	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
305	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
306	The multiplicative inverse of -1 in the set $\{1,-1\}$ is	A. 1 B. -1 C. ± 1 D. 0 E. Does not exist
307	The set $\{1,-1, i, -i\}$ form a group under	A. Addition B. Multiplication C. Subtraction D. None
308	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
309	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
310	The set Q	A. Forms a group under addition B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
311	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
312	For any set B, $B \cup B'$ is	A. Is set B B. Set B' C. Universal set
313	If $A \subseteq B$ then $A \cup B$ is	A. A B. B C. A' D. $A \cap B$
314	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
315	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
316	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. $A \neq B$
317	If $x = 1/x$ for $x \in \mathbb{R}$ then the value of x is	A. ± 1 B. 0 C. 2 D. 4
318	The set $\{-1,1\}$ is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
319	Which of the following is not a subset of all sets	A. Subset B. Union

319	Ψ set is the _____ of all sets	C. Universal D. Intersection
320	$\{x : x \in \mathbb{Z} \text{ and } x < 1\}$ is	A. Singleton set B. A set with two points C. Empty set D. None of these
321	The set $\{\{a,b\}\}$ is	A. Infinite set B. Singleton set C. Two points set D. Empty set
322	$(A \cap B)^c =$	A. $A \cap B$ B. $(A \cup B)^c$ C. $A^c \cup B^c$ D. Φ
323	The set of the first elements of the orders pairs forming a relation is called its	A. Relation in B B. Range C. Domain D. Relation In A
324	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
325	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
326	The function $\{f(x,y) y = ax^2 + bx + c\}$ is	A. One-one function B. Constant function C. Onto function D. Quadratic function
327	To each element of a group there corresponds inverse element	A. Two B. One C. No D. Three
328	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
329	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
330	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
331	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
332	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
333	The set \mathbb{R} isw.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
334	The set $\{\mathbb{Z} \setminus \{0\}\}$ is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
335	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
336	The set $(\mathbb{Z}, +)$ 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

337	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
338	$\{1, 2, 3, 4, \dots\}$ is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
339		A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
340		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
341	Let A and B be two sets. If every element of A is also an element of B then	
342	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
343	The set of whole numbers is subset of	A. The set on integers B. The set of natural numbers C. $\{1, 3, 5, 7, \dots\}$ D. The set of prime numbers
344	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
345	The set of real numbers is a subset of	A. The set of natural numbers B. The set of rational numbers C. The set of integers D. The set of complex numbers
346	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
347	$\{1, 2, 3\}$ is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
348	$A = B$ if	D. A is equivalent to B
349		A. An empty set B. Universal set C. A singleton set D. None of these
350		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
351		A. An empty set B. Universal set C. A singleton set D. None of these
352		A. A finite set B. An infinite set C. An empty set D. None of these
353	The sets $\{1, 2, 4\}$ and $\{4, 6, 8, 10\}$ are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Overlapping sets
354	$A - B =$ _____	
355	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
		A. The set of natural numbers between 3 and 10

356	Which of the following sets is finite	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
357	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
358	Question Image	
359	If $n(A) = n$ then $n(P(A))$ is	A. $2n$ B. n^{2^2} C. $n/2$ D. 2^{n^2}
360	What is the number of elements of the power set of $\{0, 1\}$	A. 1 B. 2 C. 3 D. 4
361	What is the number of elements of the power set of $\{\}$	A. 0 B. 1 C. 2 D. 3
362	Write down the power set of $\{9, 11\}$	
363	If A and B are two sets then intersection of A and B is denoted by	
364	Two sets A and B are said to be disjoint if	
365	Question Image	
366	Question Image	
367	Question Image	
368	Question Image	
369	Question Image	
370	Question Image	
371	Question Image	
372	Question Image	
373	Question Image	
374	Question Image	A. A B. B C. $A \cap B'$ D. $B \cap A'$
375	Question Image	
376	Question Image	
377	Question Image	A. A B. A' C. U D. $A \cap A'$
378	Question Image	B. A C. A' D. U
379	Question Image	A. A B. A' C. U D. U'
380	Question Image	A. A B. A' C. U D. None of these
381	Question Image	A. $n(A)$ B. $n(B)$ C. 0 D. 1
382	Question Image	A. A B. B C. $A \cap B$ D. $A \cup B$

		C. U D. None of these
383	Question Image	A. A B. B C. U D. None of these
384	Question Image	A. A B. A' C. U D. None of these
385	A statement which is either true or false is called	A. Induction B. Deduction C. Proposition D. Logic
386	If P is a proposition then its negative is denoted by	
387	If p and q are two statements then their conjunction is denoted by	
388	A conditional "if p then q" is denoted by	
389	If p and q are two statements then their biconditional 'p if q' is denoted by	
390	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
391	Question Image	A. Conclusion B. Implication C. Antecedent D. Hypothesis
392	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
393	Question Image	
394	Question Image	
395	Question Image	
396	The number of subsets of a set having three elements is	A. 4 B. 6 C. 8 D. none of these
397	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
398	If A and B are two sets then any subset R of $B \times A$ is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
399	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
400	The set of first elements of the ordered pairs in a relation is called its	A. domain B. range C. relation D. function
401	Question Image	
402	Question Image	
403	Question Image	
404	Question Image	
405	Question Image	
406	Question Image	A. a constant function B. linear function C. quadratic function

		C. quadratic function D. none of these
407	The graph of a linear function is	A. a circle B. triangle C. a straight line D. none of these
408	Question Image	A. square root function B. identity function C. linear function D. quadratic function
409	Question Image	D. none of these
410	The negation of a number	A. a relation B. a function C. unary operation D. binary operation
411	Question Image	D. none of these
412	Question Image	
413	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
414	$G = \{e, a, b, c\}$ 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
415	Question Image	
416	Question Image	A. 4 B. 3 C. 2 D. 1
417	Question Image	A. $A = C$ B. $A = B$ C. $B = C$ D. None of these
418	The complement of set A relative to universal set U is the set	
419	The multiplicative inverse of x such that $x = 0$ is	A. $-x$ B. does not exist C. $1/x$ D. 0
420	Multiplicative inverse of "1" is	A. 0 B. -1 C. 1 D. $\{0, 1\}$
421	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
422	Which of the following is the subset of all sets?	
423	The set $\{\{a, b\}\}$ is	A. Infinite set B. Singleton set C. Two points set D. None
424	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
425	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
426	The set of complex numbers forms a group	A. Addition B. Multiplication

420	under the binary operation of	C. Division D. Subtraction
427	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. 0 D. Does not exist
428	The set {1, -1, 1, -1}, form a group under	A. Addition B. Multiplication C. Subtraction D. None
429	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
430	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
431	The set (Q, .)	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
432	The set (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
433	For any set B, BUB' is	A. Is set B B. Set B' C. Universal set D. None of these
434	Question Image	A. A B. B C. A' D. None of these
435	In set builder notation the set {0, 1, 2,, 100} can be written as	
436	Question Image	A. 3 B. 1 C. 2 D. 4
437	Question Image	A. 1 B. 12 C. 5 D. 29
438	Question Image	A. A = B B. B = C C. A = C D. None of these
439	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
440	Question Image	
441	The set {-1, 1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
442	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
443	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
444	Additive inverse of -a -b is	A. a B. -a + b C. a - b D. a + b

445	Question Image	<p>A. $\frac{1}{2}x$</p> <p>B. $-x$</p> <p>C. $2x$</p> <p>D. $0.5x$</p>
446	Question Image	<p>A. $-x$</p> <p>B. Infinite set</p> <p>C. $\{-4, 4\}$</p> <p>D. None of these</p>
447	The identity elements with respect to subtraction is	<p>A. 0</p> <p>B. 1</p> <p>C. -1</p> <p>D. Does not exist</p>
448	Multiplicative inverse of 0 is	<p>A. 0</p> <p>B. 1</p> <p>C. ± 1</p> <p>D. Does not exist</p>
449	Decimal part of irrational number is	<p>A. Terminating</p> <p>B. Repeating only</p> <p>C. Neither repeating nor terminating</p> <p>D. Repeating and terminating</p>
450	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.	<p>A. 45</p> <p>B. 30</p> <p>C. 25</p> <p>D. 50</p>
451	Φ set is the _____ of all sets?	<p>A. Subset</p> <p>B. Union</p> <p>C. Universal</p> <p>D. Intersection</p>
452	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>
453	The set $\{ \{a, b\} \}$ is	<p>A. Infinite set</p> <p>B. Singleton set</p> <p>C. Two points set</p> <p>D. Empty set</p>
454	Question Image	
455	If $\#n = (n-5)^2 + 5$, then find $\#3 \times \#4$.	<p>A. 54</p> <p>B. 12</p> <p>C. 4</p> <p>D. 9</p>
456	The set of the first elements of the ordered pairs forming a relation is called its	<p>A. Relation in B</p> <p>B. Range</p> <p>C. Domain</p> <p>D. Relation in A</p>
457	A function whose range is just one element is called	<p>A. One-one function</p> <p>B. Constant function</p> <p>C. Onto function</p> <p>D. Identity function</p>
458	The graph of a quadratic function is	<p>A. Circle</p> <p>B. Straight line</p> <p>C. Parabola</p> <p>D. Triangle</p>
459	The function $f\{(x, y) \mid y = ax^2 + bx + c\}$ is	<p>A. One-one function</p> <p>B. Constant function</p> <p>C. Onto function</p> <p>D. Quadratic function</p>
460	To each element of a group there corresponds _____ inverse element	<p>A. Two</p> <p>B. One</p> <p>C. No</p> <p>D. Three</p>
461	The set of integers is	<p>A. Finite group</p> <p>B. A group w.r.t addition</p> <p>C. A group w.r.t multiplication</p> <p>D. Not a group</p>
462	Question Image	<p>A. Addition</p> <p>B. Multiplication</p> <p>C. Division</p> <p>D. Both addition and multiplication</p>
463	The set $\{a, b\}$ is	<p>A. Group under the multiplication</p> <p>B. Group under addition</p>

463	The set $\{-1, 1\}$ is	C. Does not form a group D. Contains no identity element
464	The multiplicative inverse of -1 in the set $\{1, -1\}$ is	A. 1 B. -1 C. +1 D. 0
465	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
466	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
467	The set \mathbb{R} is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
468	The set $\{\mathbb{Z} \setminus \{0\}\}$ is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
469	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
470	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
471	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
472	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)
473	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
474	If $S = \{3, 6, 9, 12, \dots\}$, then	A. $S =$ Four multiples of 3 B. $S =$ Set of even numbers C. $S =$ Set of prime numbers D. $S =$ All multiples of 3
475	If $P = \{x/x = p/q \text{ where } p, q \in \mathbb{Z} \text{ and } q \neq 0\}$, then P is the set of	A. Irrational numbers B. Even numbers C. Rational numbers D. Whole numbers
476	$A = B$ 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
477	The set of months in a year beginning with S.	A. {September, October, November} B. Singleton set C. Null set D. Empty set
478	$P \notin A$ means	A. P is subset of A B. P is an element of A C. P does not belongs to A D. A does not element of P
479	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. $A \sim B$
480	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
		A. Not subset of every set

481	Empty set is	<p>A. Not subset of every set</p> <p>B. Finite set</p> <p>C. Infinite set</p> <p>D. Not the member of real numbers</p>
482	Every set is an improper subset of	<p>A. Empty set</p> <p>B. Equivalent set</p> <p>C. Itself</p> <p>D. Singleton set</p>
483	$\{0\}$ is a	<p>A. Empty set</p> <p>B. Singleton set</p> <p>C. Zero set</p> <p>D. Null Set</p>
484	\mathbb{Z} is a	<p>A. Infinite set</p> <p>B. Finite set</p> <p>C. Singleton set</p> <p>D. Set of all integers</p>
485	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>
486	If $C = \{p/p < 18, p \text{ is a prime number}\}$, then $C =$	<p>A. $\{2, 3, 4, \dots, 17\}$</p> <p>B. $\{2, 4, 6, 8, \dots, 16\}$</p> <p>C. $\{1, 3, 5, 7, 9, 11, 13, 15, 17\}$</p> <p>D. $\{3, 6, 9, 12, 15\}$</p>
487	If $a = \{2m/2m < 9, m \in \mathbb{P}\}$, the $n(A) =$	<p>A. $\{2, 3, 4, 5, 6, 7, 8\}$</p> <p>B. $\{2, 4, 6, 8, \dots, 16\}$</p> <p>C. $\{4, 6\}$</p> <p>D. $\{2, 3, 5, 7\}$</p>
488	If $B = \{x/x \in \mathbb{Z}^+ - 3 < x < 6\}$, then $n(B) =$	<p>A. 5</p> <p>B. $\{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$</p> <p>C. 8</p> <p>D. 9</p>
489	If $O = \{1, 3, 5, \dots\}$, then $n(O) =$	<p>A. Infinite</p> <p>B. Even numbers</p> <p>C. odd integers</p> <p>D. 99</p>
490	If $A = \{2m/m^3 = 8, m \in \mathbb{Z}\}$ then $A =$	<p>A. $\{1, 8, 27\}$</p> <p>B. $\{4\}$</p> <p>C. $\{2, 4, 6\}$</p> <p>D. $\{2, 16, 54\}$</p>
491	If $A \subseteq B$, and B is a finite set, then	<p>A. $n(A) \leq n(B)$</p> <p>B. $n(B) \leq n(A)$</p> <p>C. $n(A) \leq n(B)$</p> <p>D. $n(A) \geq n(B)$</p>
492	The set of even prime numbers is	<p>A. $\{2, 4, 6, 8, 10\}$</p> <p>B. $\{2, 4, 6, 8, 10, 12\}$</p> <p>C. $\{1, 3, 5, 7, 9\}$</p> <p>D. $\{2\}$</p>
493	If $D = \{a\}$, the $P(D) =$	<p>A. $\{a\}$</p> <p>B. $\langle p \text{ class="MsoNormal"><!--[if gte msEquation 12]><m:oMathPara><m:oMath><i style="mso-bidi-font-style:normal"><m:r></m:r></i></m:oMath></m:oMathPara><![endif]><!--[if !msEquation]><!--[if gte vml 1]><v:shapetype id="_x0000_t75" coordsize="21600,21600" o:spt="75" o:preferrelative="t" path="m@4@5l@4@11@9@11@9@5xe" filled="f" stroked="f"><v:stroke jointstyle="miter"><v:formulas><v:f eqn="if lineDrawn pixelLineWidth 0"/><v:f eqn="sum @0 1 0"/><v:f eqn="sum 0 0 @1"/><v:f eqn="prod @2 1 2"/><v:f eqn="prod @3 21600 pixelWidth"/><v:f eqn="prod @3 21600 pixelHeight"/><v:f eqn="sum @0 0 1"/><v:f eqn="prod @6 1 2"/><v:f eqn="prod @7 21600 pixelWidth"/><v:f eqn="sum @8 21600 0"/><v:f eqn="prod @7 21600 pixelHeight"/><v:f eqn="sum @10 21600 0"/></v:formulas><v:path o:extrusionok="f" gradientshapeok="t" o:connecttype="rect"/><o:lock v:ext="edit" aspectratio="t"/></v:shapetype><v:shape id="_x0000_i1025" type="#_x0000_t75" style="width:6.75pt; height:14.25pt"><v:imagedata src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image001.png" o:title="" chromakey="white"/></v:shape><![endif]><!--[if !vml]><!--[endif]><!--[endif]></p></o:p></p>$</p> <p>C. $\{\emptyset, \{a\}\}$</p> <p>D. $\{\emptyset, a\}$</p>
494	If $E = \{\}$, then $P(E)$	<p>A. \emptyset</p> <p>B. $\{\}$</p> <p>C. $\{(2), (4), (6), \dots\}$</p> <p>D. $\{\emptyset\}$</p>

495	The number of subset of $\{0\}$ is	A. 1 B. 2 C. 3 D. None
496	The many subset can be formed from the set $\{a,b,c,d\}$	A. 8 B. 4 C. 12 D. 16
497	The number of proper subset of $A = \{a.b.c.d\}$ is	A. 3 B. 6 C. 8 D. 15
498	The number of subsets of $B = \{1,2,3,4,5\}$	A. 10 B. 32 C. 16 D. 5
499	\emptyset is a symbol of	A. singleton set B. Empty set C. Equivalent set D. Infinite set
500	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite