

## ECAT Pre General Science Mathematics Chapter 1 Number System Online Test

Sr	Questions	Answers Choice
1	Question Image	A. A complex number B. A rational number C. A natural number D. An irrational number
2	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
3	Multiplicative inverse of 0 is	A. 0 B. 1 C. $\pm 1$ D. Does not exist
4	The identity element with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
5	If $A = \{x / x \in \mathbb{R} \wedge x^2 - 16 = 0\}$ then $A =$	A. - x B. Infinite set C. $\Phi$ D. $\{-4, 4\}$
6	Additive inverse of - a - b is	A. a B. -a + b C. a - b D. a + b
7	If a set S contains n elements then P (S) has ..... number of elements	A. $2^{n-1}$ B. $2^{n-2}$ C. 2.n D. $n^2$
8	Total number of subsets that can be formed out of the set {a,b,c} is	A. 1 B. 4 C. 8 D. 12
9	In set builder notation the set {0,1,2,.....100} can be written as	A. $\{x / x \in \mathbb{B} \wedge x \leq 100\}$ B. $\{x / x \in \mathbb{W} \wedge x \leq 101\}$ C. $\{x / x \in \mathbb{Z} \wedge x \leq 101\}$ D. The set of first 100 whole numbers
10	Multiplicative inverse of "1" is	A. 0 B. $\pm 1$ C. 1 D. {0,1}
11	$\sqrt{-1b} = ?$	A. b i B. -i b C. b <sup>2</sup> D. $i\sqrt{b}$
12	What is the conjugate of -6 -i	A. -6 +i B. 6 + i C. -6 -i D. 6 -i
13	Which element is the additive inverse of (a,b) in Complex numbers	A. (a,0) B. (0,b) C. (a,b) D. (-a,-b)
14	If $Z_1 = 1 + i$ , $Z_2 = 2 + 3i$ , then $ Z_1 - Z_2  = ?$	A. $\sqrt{5}$ B. $\sqrt{7}$ C. -1-2i D. $\sqrt{3}$
15	$i^{101} =$	A. i B. $i^{2^2}$ C. -i D. -i

16	The polar form of complex number $x \neq 0$ is $y =$	A. $r \cos \theta + r \sin \theta$ B. $r \cos \theta + i r \sin \theta$ C. $\cos \theta + r \sin \theta$ D. $i \cos \theta + i \sin \theta$
17	$(7,9) + (3,-5) =$	A. (4,4) B. (10,4) C. (9,-5) D. (7,3)
18	$\sqrt{-1} b =$	A. b B. 2 C. $2b$ D. None of these
19	$i^9 =$	A. $i^{2/2}$ B. -1 C. 1 D. i
20	$i^2 =$	A. 1 B. 2 C. -1 D. 0
21	$(a,0) \times (c,0) =$	A. (0,ac) B. (ac,0) C. (0,0) D. (a,c)
22	$(a,b) + (-a,-b) =$	A. (0,0) B. (a,b) C. (-a,-b) D. (1,1)
23	The conjugate of $\sqrt{5} i$ is	A. $\sqrt{5}$ B. $-\sqrt{5} i$ C. i D. 5i
24	$(a + bi) - c(c + di) =$	A. $(a + b) = (c + d)$ B. $(a + c) + i(b + d)$ C. $(a - c) + (c - d)i$ D. $(a - c) + (b - d)i$
25	$i^3 =$	A. -1 B. i C. -i D. 1
26	In $(x + iy)$ y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
27	In $(x + iy)$ x is the known as	A. Imaginary part of complex number B. Real part of complex number C. Complex number D. None of above
28	$i =$	A. $\sqrt{1}$ B. $\sqrt{2}$ C. $\sqrt{-2}$ D. $\sqrt{-1}$
29	The property used in $-3 < -2 \Rightarrow 0 < 1$	A. Commutative property B. Additive property of inequality C. Additive inverse D. Additive identity
30	$(\sqrt{3} + \sqrt{5}) + \sqrt{7} = \sqrt{3} + (\sqrt{5} + \sqrt{7})$ property used in above is	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t to addition