

## ECAT Mathematics MCQ's Test For Full Book

Sr	Questions	Answers Choice
1	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. $0, +(-12)i$
2	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
3	The exact degree value of the function $\sin^{-1}(-\sqrt{3}/2)$ is	A. $70^\circ$ B. $50^\circ$ C. $90^\circ$ D. $60^\circ$
4	If $uv = \text{Proj}_v u$ then	A. $u$ and $v$ are parallel B. $v$ is a unit vector C. $u$ is a unit vector D. Both $b$ and $c$
5	In a quadratic equation with leading co-efficient 1, a student reads the co-ordinates of the roots as $-15$ and $-4$ . The correct roots are	A. $6, 10$ B. $-6, -10$ C. $8, 8$ D. $-8, -8$
6	If $x^2 + px + 1$ is a factor of $ax^3 + bx + c$ , then	A. $a^2 + c^2 = -ab$ B. $a^2 - c^2 = -ab$ C. $a^2 - c^2 = ab$ D. None of these
7	Question Image	
8	$(ABC)'$ =	A. $CBA'$ B. $CBA$ C. $C'B'A$ D. $C'B'A'$
9	The $n$ th term of an A.P is $(3n+5)$ Its 75th term is	A. $26$ B. $7$ C. $21$ D. Cannot be determined
10	The period of $\tan [x/3]$ is _____	A. $2\pi$ B. $\pi$ C. $3\pi$ D. $5\pi$
11	Which of the following is a vector	A. length B. momentum C. volume D. speed
		A. -2217

12	Question Image	B. -8064 C. -1301 D. -8011
13	An observer on the top of a cliff 200 m above the sea level, observes the angles of depression of two ships on opposite sides of the cliff to be $45^\circ$ and $30^\circ$ , respectively. The distance between the ships if the line joining them points to the base of cliff is	
14	Every real number is	A. A complex number B. A rational number C. A natural number D. A prime number
15	For a set A, $A \cup A^c =$ -----	A. A B. $\emptyset$ C. $A^c$ D. U
16	Three consecutive terms of a progression are 30, 24, 20. The next terms of the progression is	
17	By expressing $\sin 125^\circ$ in terms of trigonometrical ratios, answer will be	A. $\sin 65^\circ = 0.9128$ B. $\sin 55^\circ = 0.8192$ C. $\sin 70^\circ = 0.5384$ D. $\sin 72^\circ = 0.1982$
18	Question Image	
19	There is no element common in	A. N and W B. E and W C. N and O D. Q and Q'
20	The middle term of $[1/x-x]^{10}$ is	A. -152 B. -252 C. 371 D. -421