

ECAT Pre General Science Mathematics Online Test

Sr	Questions	Answers Choice
1	For an A.P common difference d	A. Can be zero B. May or may not zero C. Cannot be zero D. None of these
2	The number of x-intercepts of $y = \sin x$ in his period	A. 0 B. 1 C. 2 D. 3
3	The central angle of an arc of a circle whose length is equal to the radius of the circle is called one	A. Degree B. Second C. Minute D. Radian
4	$A = [3]$ is a/an	A. Square matrix B. Scalar matrix C. Diagonal matrix D. Identity matrix
5	Question Image	
6	If the flag-staff 6 meters high placed on the top of a tower. Makes the shadow $2\sqrt{3}$ m on the ground, then the angle of elevation of the sun is	A. 30° B. 35° C. 45° D. 60°
7	If the sum of two unit vectors is a unit vector the the magnitude of their difference is	A. $\sqrt{2}$ B. $\sqrt{3}$ C. 1 D. None of these
8	The angle of depression of a point A on the ground from the top of the tower is 30° , then the angle of elevation of the top of the tower at the point A is	A. 60° B. 40° C. 41° D. 30°
9	Range of $\sec x$ is _____	A. $[-1, 1]$ B. $\mathbb{R}$ C. Negative real numbers D. $\mathbb{R} = \{x \mid -1 \leq x \leq 1\}$
10	Question Image	C. $x^2 + 2x + c$ D. $(x^2 + 2x - 1)^4 + c$
11	The angle AOP which the ray from an observer's eye at O to an object at P at a lower level makes with horizontal ray OA through O is called the	A. Angle of depression B. Angle of elevation C. Acute angle D. Obtuse angle
12	The law of sines is	
13	If $A = \{x/x \text{ is a positive integer and } 4 \leq x \leq 23\}$, then $A =$	A. $\{1, 2, 3, 4, 5, 6, 7\}$ B. $\{4, 5, 6, \dots, 22\}$ C. $\{1, 2, 3, \dots, 23\}$ D. $\{1, 2, 3, 4, 5\}$
14	$\tan^{-1} x =$ _____	A. $\sin x$ B. $\sec^{-1} x$ C. $\cot^{-1} x$ D. None of these
15	Question Image	
16	Question Image	B. $a^x \ln a + c$ C. $a^x + c$ D. $x a^x + c$
17	$A = B$ if	D. A is equivalent to B
18	The set of the first elements of the ordered pairs forming a relation is called its	A. Relation in B B. Range C. Domain

D. Relation in A

19 If $|ai + (\alpha+1)j + 2k| = 3$ then value of α is

- A. 1,2
- B. -1,-2
- C. 1,-2
- D. -1,2

20 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