

ECAT Mathematics Online Test

Sr	Questions	Answers Choice
1	$\cos (180^\circ - \theta) =$	<p>A. $\sin \theta$</p> <p>B. $-\cos \theta$</p> <p>C. $-\sin \theta$</p> <p>D. None of above</p>
2	$(1 - x)^3 =$ _____	<p>A. $1 + 3x + 3x^2 + x^3$</p> <p>B. $1 + x + x^2 + x^3$</p> <p>C. $1 - x + x^2 - x^3$</p> <p>D. $1 - 3x + 3x^2 - x^3$</p>
3	Question Image	<p>A. $-\cot 4x + c$</p> <p>B. $\cot 4x + c$</p> <p>C. $\tan 4x + c$</p> <p>D. $-\tan 4x + c$</p>
4	Question Image	
5	e-radii are denoted by	<p>A. η</p> <p>B. r_2</p> <p>C. r_3</p> <p>D. All of these</p>
6	Question Image	<p>A. $-2x^3$</p> <p>B. $2x^{-3}$</p> <p>C. $-2x^{-3}$</p> <p>D. $2x^3$</p>
7	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>
8	If α, β are the roots of $ax^2 + bx + c = 0$, the equation whose roots are doubled is	<p>A. $ay^2 + 2by + c = 0$</p> <p>B. $ay^2 + 2by + 4c = 0$</p> <p>C. $ay^2 + 2by + c = 0$</p> <p>D. $ay^2 + by + 4c = 0$</p>
9	Question Image	
10	Question Image	
11	Name the property used in $100 + 0 = 100$	<p>A. Additive inverse</p> <p>B. Multiplicative inverse</p> <p>C. Additive identity</p> <p>D. Multiplicative identity</p>
12	The solution set of trigonometric equation contains	<p>A. one element</p> <p>B. two elements</p> <p>C. three elements</p> <p>D. Infinite elements</p>
13	How many terms of the A.P 3,6,9,12,15.....must be taken to make the sum 108	<p>A. 8</p> <p>B. 6</p> <p>C. 7</p> <p>D. 36</p>
14	Write the first four terms of the arithmetic sequence 5, 2, -1, ... is	<p>A. 3</p> <p>B. -4</p> <p>C. 7</p> <p>D. 1</p>

A. a^2

B. $a^2 + 2a + 1$

C. $a^2 - 2a + 1$

D. $a^2 - 1$

15 For Cosine Rule of any triangle ABC, b^2 is equal to

$a^2 + 2ab \cos A$
B. $a^3 + c^3$
 $a^2 + c^2 - 3ab \cos A$
C. $a^2 + c^2 - 2ac \cos B$
D. $a^2 + c^2 - c^2$
 $4bc \cos A$

16 Question Image

A. y/x
B. x/y
C. y/z
D. None

17 $ab > 0$ and $a > 0$ then

A. $a > b$
B. $a < b$
C. $a = b$
D. None

18 Question Image

19 Question Image

20 For all positive integral value of $n, 3^n < n!$, when

A. $n > 6$
B. $n < 6$
C. $n < 11$
D. $n > 11$