

ECAT Pre General Science Mathematics Online Test

Sr	Questions	Answers Choice
1	A stationary point x is a relative extrema of $y = f(x)$ is	A. $f''(x) > 0$ B. $f''(x) < 0$ C. $f''(x) \neq 0$ D. $f''(x) = 0$
2	Question Image	
3	If we have a statement "if p then q " then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
4	If $Z_1 = 1 + i$, $Z_2 = 2 + 3i$, then $ Z_1 - Z_2 = ?$	A. $\sqrt{5}$ B. $\sqrt{7}$ C. $-1 - 2i$ D. $\sqrt{3}$
5	Question Image	D. none of these
6	The many subset can be formed from the set $\{a, b, c, d\}$	A. 8 B. 4 C. 12 D. 16
7	Question Image	D. none of these
8	Question Image	
9	For any set X , $X \cup X$ is	A. X B. X' C. Φ D. Universal Set
10	Question Image	A. 5 B. 10 C. 20 D. 30
11	If $f(x) = (-x)^2$ then $f(-2)$ is	A. 0 B. 2 C. -4 D. 4
12	Root of the equation $3^{x-1} + 3^{1-x} = 10$ is	A. 2 B. 1 C. 0 D. -1
13	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
14	Question Image	A. $\cos 2x + c$ B. $-\cos 2x + c$ C. $\tan 2x + c$ D. $\cot 2x + c$
15	Question Image	A. Zero matrix B. Diagonal matrix C. Column matrix D. Scalar matrix
16	Geometrically the modulus of a complex number represents its distance from the	A. Point (1,0) B. Point (0,1) C. Point (1,1) D. Point (0,0)
17	Question Image	
18	If $b_1, b_2, b_3, \dots$ are in G.P. with first term unity and common ratio r , then the minimum value of $b_1 + b_3 + b_5$ is equal to	A. $\frac{3}{4}$ B. $\frac{1}{4}$ C. 1 D. None of these

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If $a_1 = 3$, $r = 2$, then the n th term of the G.P. is

- A. $2 \cdot 3^{n-1}$
- B. $3 \cdot 2^n$
- C. $3 \cdot 2^{n+1}$
- D. $3 \cdot 2^{n-1}$

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Question Image