

ECAT Mathematics Online Test

Sr	Questions	Answers Choice
1	If x+y+z++2n = 2n+1-1∀n∈W,then cube root of xyz is equal to	A. 1 B. 4 C. 2 D. 8
2	Period of cosec x is	
3	The area of sector with central angle of 1 radian in a circular region whose radius is 2m is	A. 0.5m2 B. 2m2 C. 1m2 D. 4m2
4	Question Image	
5	For any two sets A and, A ⊆ B if	A. $x \in A \Rightarrow x \in B$ B. $x \notin A \Rightarrow x \notin B$ C. $x \in A \Rightarrow x \notin B$ D. None of these
6	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity
7	The intercepts of the plane $2x - 3y + 4z = 12$ on the co-ordinate axes are given by	A. 2, -3, 4 B. 6, -4, -3 C. 6, -4, 3 D. 3, -2, 1.5
8	If a polynomial $P(x)$ is divided by $x + a$, then the remiander is	A. P(a) B. P(-a) C. P(0) D. None of these
9	Question Image	
10	Question Image	A. Linear equation B. Quadratic equation C. Cubic equation D. None of these
11	1/3 is	A. A prime number B. An integer C. A rational number D. An irrational number
12	If the graph of f is entirely below the x-axis, then the value of definite integral is	A. = 0 B. &It 0 C. > 0 D. None
13	If a polynomial p(x) is divided by x-c, then the remainder is	A. p(x) B. x-c C. c D. P(c)
14	How many arrangements of the letters of the word MATHEMATICS can be made	
15	A farmer possesses 100 hectometers of land and wants to grow corn and wheat. Cultivations of corn requires 3 hours per hectometer while cultivation of wheat requires 2 hours per hectometer. Working hours cannot exceed 240. If he gets a profit of Rs. 20 per hectometer for corn and Rs. 15 per hectometer for wheat. The profit function for the farmer is	A. $P(x, y) = 20x + 15y$ B. $P(x, y) = 2x + 3y$ C. $P(x, y) = x + y$ D. $P(x, y) = 3x + 2y$
16	Question Image	
17	Question Image	A. 1 B. 2 C. 3
18	Question Image	
19	A kite flying at a height of 67.2 m is attached to a fully stretched string inclined at an angle of 53 to the horizontal, the length of the string	A. 62m B. 82m C. 73m