

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	The range of the principle cos function is	
2	The slope of the tangent of the circle $x^3 + y^3 = 25$ at (4,3) is:	A. -4/5 B. 4/3 C. -25/4 D. 25/3
3	The solution of differential equation:	A. $dy/dx + y/x = x^{>2}</sup>$ is : B. $4xy = x^{>4}</sup> + c$ C. $4x = x^{>4}</sup> = c$ D. $4y = x^{>4}</sup> + c$ E. $4x = 4x^{>3}</sup> + c$
4	The distance of the point (2, -3) from x-axis is	A. -2 B. -3 C. 2 D. 3
5	$\sin^{-1}(-x) =$	A. x B. -x C. $-\sin^{-1} x$ D. $\cos^{-1} x$
6	If $kx^2 + 2hxy - 4y^2 = 0$ represents two perpendicular lines then	A. $k = 2$ B. $k = \pm 2$ C. $k = -2$ D. $k \neq 0$
7	Two quadratic equation in which xy term is missing and the coefficients of x^2 and y^2 are equal, give a linear equation by _____	A. Addition B. Subtraction C. Multiplication D. Division
8	$\cot \theta = \sin 2\theta$ if $\theta =$	
9	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. 0 B. 1 C. 2 D. 4
10	If $B = \{x \in \mathbb{Z} \mid -3 < x < 6\}$, then $n(B) =$	A. 5 B. $\{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$ C. 8 D. 9
11	For any set B, $B \cup B'$ is	A. Is set B B. Set B' C. Universal set D. None of these
12	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
13	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. 0 B. 1 C. 13
14	$x = 0$ is in the solution of the inequality	A. $x > 0$ B. $3x + 4 < 0$ C. $x + 3 < 0$ D. $x - 2 < 0$
15	Three numbers are chosen random without replacement from $\{1, 2, 3, \dots, 10\}$. the probability that minimum of the chosen numbering is 3 or their maximum is 7	A. 7 / 40 B. 5 / 40 C. 11 / 40 D. None of these
16	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
17	If $x^2 - 7x + a$ has remainder 1 when divided by $x + 1$, then $a =$ _____	A. -7 B. 7 C. 0 D. None of these

18 In natural logarithm the base is

- B. 0
- C. 10
- D. e

19 If $(0, 0)$ and $(1, 0)$ are the end points of a diameter, then the equation of the circle is

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