

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	The curve $f(x,y) = 0$ has a central symmetry if	A. $f(-x,-y)=f(x,y)$ B. $f(x,-y)=f(x,y)$ C. $f(-x,y)=f(x,y)$ D. $f(-x,-y)\neq f(x,y)$
2	The solution set of the equation $\tan^{-1}x - \cot^{-1}x = \cos^{-1}(2-x)$ is	A. $[0, 1]$ B. $[-1, 1]$ C. $[1, 3]$ D. None of these
3	A and B be two square matrices and if their inverse exist the $(AB)^{-1} =$	A. $A^{-1} B^{-1}$ B. AB^{-1} C. $A^{-1}B$ D. $B^{-1}A^{-1}$
4	The multiplicative inverse of 4 is	A. -4 B. -1/4 C. 1/4 D. 1
5	$\sin^{-1} x =$	A. $\sin(\pi/2-x)$ B. $\sin^{-1}(\pi/2-x)$ C. $\pi/2 - \cos^{-1}x$ D. $\pi/2 + \cos^{-1}x$
6	Question Image	A. (x, y) B. (kx, y) C. (x, ky) D. (kx, ky)
7	Question Image	A. a B. 2a C. 3a D. 4a
8	If $y = \sin(ax + b)$, then fourth derivative of y with respect to x =	A. $a^4 \cos(ax + b)$ B. $a^4 \sin(ax + b)$ C. $-a^4 \sin(ax + b)$ D. $a^4 \tan(ax + b)$
9	$\cos^{-1} 12/13 =$	A. $\tan^{-1} 3/5$ B. $\cot^{-1} 13/12$ C. $\sec^{-1} 13/12$ D. $\sin^{-1} 5/13$
10	Question Image	
11	An indicated sum of terms of a sequence is represented by	A. S_n B. an C. $S(n)$ D. $\{S_n\}$
12	A polynomial $P(x)$ has a factor $(x-a)$ if $P(a) =$	A. a B. x C. 1 D. 0
13	For any positive integer n	A. $AB^n = B^n A \Leftrightarrow AB = BA$ B. $AB^n = B^n A \Leftrightarrow A, B$ are square matrices and $AB = BA$ C. $AB^n = B^n A \Leftrightarrow A + B$ D. $AB^n = B^n A \Leftrightarrow A$ and B are square matrices
14	The number of proper subset of $A = \{a, b, c, d\}$ is	A. 3 B. 6 C. 8 D. 15
15	Question Image	A. 0 B. -1 C. 1 D. not defined

16	Question Image	
17	The quadratic equation $8 \sec^2 \theta - 6 \sec \theta + 1 = 0$ has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
18	A square matrix all of whose elements except the main diagonal are zeros is called a	A. Null matrix B. Singular matrix C. Symmetric matrix D. Diagonal matrix
19	The number of permutations of n objects of which there are n_1 like of one kind, n_2 like of the second kind and n_3 like objects of third kind are	
20	Question Image	A. 0 B. 1