

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	Question Image	
2	The value of $\cos(\cos^{-1} 1/2)$ is	A. $1/2$ B. $\sqrt{3}/2$ C. $-1/2$ D. $1/\sqrt{2}$
3	A square matrix A for which $A^t = A$ is called a	A. Column matrix B. Symmetric matrix C. Skew-symmetric matrix D. Row matrix
4	Question Image	
5	Multiplicative inverse of "1" is	A. + 1 B. 0 C. 1 D. None of these
6	Two circle s1: $x^2 + y^2 + 2x - 2y - 7 = 0$; s2: $x^2 + y^2 - 6x + 4y + 9 = 0$	A. Touch externally B. Touch internally C. Intersects each other D. Do not intersects
7	$1^0 =$ _____	
8	Maximum value of $z = 15x + 20y$ subject to $3x + 4y \leq 12, x, y \geq 0$ is given by	A. 46 B. 60 C. 50 D. 70
9	The graph of $y < 2$ is the	A. Left half plane B. upper half plane C. Right half plane D. Lower half plane
10	The distance of a moving particle at any instant t is $x = 3t^2 + 1$ then velocity of particle at t = 10 is	A. 50 cm/sec B. 60 cm/sec C. 61 cm/sec D. None of these
11	Number of permutations of n distinct objects taken r ($r < n - 3$) at a time which exclude 3 ($< n$) particular objects is	A. $3! P(n, r - 3)$ B. $P(n, 3) P(n, r - 3)$ C. $P(r, r) P(n, r - 3)$ D. $P(n - 3, r)$
12	Question Image	A. 0 B. 1 C. -1 D. none of these
13	The set $\{1, -1, i, -i\}$	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
14	If $ a \times b ^2 + (a, b)^2 =$ _____	A. $ a ^2 + b ^2$ B. $ a ^2 - b ^2$ C. $ a ^2 b ^2$ D. None
15	Question Image	
16	The solution of the equation $\cos^2 \theta + \sin \theta + 1 = 0$ lies in the interval	
17	Question Image	A. $a \sin(ax + b) + c$ B. $-a \sin(ax + b) + c$
18	A circle which touches one side of a triangle externally and the other two sides produced is called	A. In-circle B. Circumcircle C. e-circle D. Point circle

19	The multiplicative inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
20	Out of 40 consecutive natural numbers, two are chosen at random. Probability that the sum of the numbers is odd, is	A. $14 / 29$ B. $20 / 39$ C. $1 / 2$ D. n
