

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	Which of the following is a scalar	A. displacement B. velocity C. acceleration D. density
2	$nCr - r$ is equal to	A. $n!$ B. $n-1Cr$ C. $nCr$ D. None of these
3	The identity element with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
4	Question Image	
5	If for the matrix A, $A^5 = I$ , then $A^{-1} =$	A. $A^{2\frac{1}{2}}$ B. $A^{3\frac{1}{2}}$ C. A D. None of above
6	The range of $y = x^2 + 1$ is the set of non-negative real numbers except	A. $0 \leq y \leq 1$ B. $0 < y < 1$ C. $0 \leq y \leq 1$ D. $0 < y \leq 1$
7	Question Image	
8	Derivative of $a$ w.r.t $x$ is	A. 0 B. 1 C. $x$ D. $x$
9	The first three terms in the expansion of $(1 - x)^{-1}$ are	A. $1 + x + x^{2\frac{1}{2}}$ B. $1 - x - x^{2\frac{1}{2}}$ C. $-1 - x + x^{2\frac{1}{2}}$ D. $1 - x + x^{2\frac{1}{2}}$
10	$\sqrt{2}$ is a number	A. Rational B. Irrational C. Even D. Odd
11	Question Image	D. none of these
12	Question Image	A. No solution B. One real solution C. More than one real solution D. None of these
13	Question Image	
14	The vector $k = [0, 0, 1]$ is called unit vector along:	A. x-axis B. y-axis C. z-axis D. None of these
15	Question Image	B. 1 C. 2 D. -2
16	Question Image	
17	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
18	$\cos \frac{\theta}{2} =$	
19	Question Image	

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Both the roots of the equation  $(x - b)(x - c) + (x - c)(x - a) + (x - a)(x - b) = 0$  are always

- A. Positive
- B. Negative
- C. Real
- D. None of these