

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	The discriminant of the quadratic equation $ax^2 + bx + c = 0$ is	A. $b^2 + 4ac$ B. $b^2 - 4ac$ C. $4ac - b^2$ D. $a^2 - 4ac$
2	Question Image	
3	The equation of the sphere thro' the origin and making intercepts a, b, c on co-ordinate axes is	A. $x^2 + y^2 + z^2 + ax + by + cz = 0$ B. $x^2 + y^2 + z^2 - 2ax - 2by - 2cz = 0$ C. $x^2 + y^2 + z^2 = a + b + c$ D. $x^2 + y^2 + z^2 - ax - by - cz = 0$
4	Which of the following is a vector.	A. distance B. temperature C. energy D. acceleration
5	Vector \hat{i} =	A. [1,0] B. [0,1,0] C. [0,0,1] D. None of these
6	Question Image	A. 1 B. 2 C. 3/2 D. 5/2
7	Question Image	A. 0 B. -2 C. 1 D. 4
8	Question Image	
9	If a, b, c are in A.P., a, b, c are in G.P. then A, m^2b, c are in	A. A.P. B. G.P. C. H.P. D. None of these
10	If S is a sample space and event set $E = S$ then $P(E)$ is	A. >0 B. 1 C. <1 D. 0
11	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
12	Question Image	
13	Question Image	A. 15/23 B. 7/15 C. 7/8 D. 15/7
14	A bag contains 5 white, 7 red and 5 black balls. If four balls are drawn one by one with replacement, the probability that none is white is	A. $(11/16)^2$ B. $(5/16)^2$ C. $(11/16)^4$ D. $(5/16)^4$
15	$\sin^{-1} x =$	A. $\tan^{-1} x$ B. $\operatorname{Cosec}^{-1} x$ C. $\operatorname{Cosec} x$ D. $\operatorname{cosec}^{-1}(1/x)$
16	For a square matrix A, if $A = A^t$, then A is called	A. Matrix B. Transpose C. Symmetric D. Non-symmetric

17	A square matrix $A = [a_{ij}]$ is lower triangular matrix when	A. $a_{ij} = 0$ for all $i < j$ B. $b_{ij} = 0$ C. $c_{ij} = 0$ D. $d_{ij} = 0$
18	Question Image	A. a^x B. $a^x \ln a$
19	The domain of a finite sequence is a	A. Set of natural numbers B. \mathbb{R} C. Subset of \mathbb{N} D. Proper subset of \mathbb{N}
20	A polynomial $P(x)$ has a factor $(x-a)$ if $P(a) =$	A. a B. x C. 1 D. 0