

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	If S is a sample space and event set $E = S$ then $P(E)$ is	A. >0 B. 1 C. <1 D. 0
2	The position vector of any point in space is	
3	<div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Question Image</div>	A. a B. 2a C. 3a D. 4a
4	$\hat{r}^2 =$	A. 1 B. 2 C. -1 D. 0
5	The angle between the vectors $\underline{u} = [-3, 5]$ and $\underline{v} = [6, -2]$ is:	A. $\pi/2$ B. $-3\pi/2$ C. π D. None of these
6	A sequence is a functions whose domain is a subset of the set of	A. Natural numbers B. Real numbers C. Whole numbers D. Rational numbers
7	If $\text{Proj}_v u = \text{Proj}_u v$, then	A. u and v are parallel B. $ u = v $ C. u and v are perpendicular D. One of u or v
8	The equation $ x+4 = x$ has solution	A. $x = -2$ B. $x = 2$ C. $x = -4$ D. $x = 4$
9	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
10	<div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Question Image</div>	A. $Y = -x \log x - x + c$ B. $Y = x \log x + x$ C. $Y = x \log x - x + c$ D. None of these
11	A number H is said to be the H.M. between a and b if a, H, b are in	A. A.P. B. G. P. C. H. P. D. None of these
12	The solution set of the inequality $ax + by < c$ is	A. straight line B. half plane C. parabola D. none of these
13	The velocity of a particle moving along a straight line is given by $v = 3t + t^2$. The acceleration of the particle after 4 seconds from the start is	A. 4 B. 11 C. 26 D. None
14	Multiplicative inverse of 0 is	A. 0 B. 1 C. +1 D. Does not exist
15	Range of cosec x is _____	A. $\{-1, 1\}$ B. R C. Negative real numbers D. $R - \{x \mid -1 \leq x \leq 1\}$
16	The formula $a_n = a + (n-1)d$ for an A.P is called	A. nth term of an A.P B. Sum of first n terms C. A.M between a and b

D. None of the above

17 Which of the following is a scalar.

- A. electric field
- B. magnetic field
- C. weight
- D. mass

18 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. $f(-x,-y)\neq f(x,y)$

19 Question Image

- A. (-6,4)
- B. (-3,2)
- C. (6,-4)
- D. (3, -2)

20 Question Image

- A. Commutative property of addition
- B. Closure property of addition
- C. Additive inverse
- D. Associative property w.r.t. to addition