

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	A box containing 10 mangoes out of which 4 are rotter. Two mangoes are taken together from the box. If one of them is found to be good, the probability that the other is also good is	A. 1 / 3 B. 8 / 15 C. 5 / 13 D. 5 / 9
2	The standard parabolic form of the equation $f(x) = x^2 + 4x + 1$ is	A. $x(x+4)+1$ B. $(x+2)^2-3$ C. $(x+4)^3+9$ D. $x(x-2)^2+1$
3	an $-an-1, \forall n \in \mathbb{N} \wedge n > 1$ in an A.P is called	A. Common difference B. nth term C. Common ratio D. None of these
4	If p and q are two statements then their conjunction is denoted by	
5	If $x^2 + px + 1$ is a factor of $ax^3 + bx + c$, then	A. $a^2 + c^2 = -ab$ B. $a^2 - c^2 = -ab$ C. $a^2 + c^2 = ab$ D. None of these
6	The probability that a slip of numbers divisible by 4 is picked from the slips of number 1,2,3,4,.....10 is	A. 1/5 B. 2/5 C. 1/10 D. 3/10
7	Range of cosec x is _____	A. $\{-1, 1\}$ B. R C. Negative real numbers D. $R - \{x \mid -1 \leq x \leq 1\}$
8	A quadratic equation in x is an equation that can be witten in the form	A. $ax^2 + b = 0$ B. $ax^3 + b^2 + c = 0$ C. $ax^2 + bx + c = 0$ D. $ax^3 + bx^3 + cx = 0$
9	Question Image	
10	The area under the curve $y = 1/x^2$ between $x = 1$ and $x = 4$ is:	A. -25 B. 0.75 C. -0.35 D. -10
11	If p, q, r and in A.P., a is G.M. between p and q and b is G.M. between q and r, then a^2, q^2, b^2 are in	A. A.P. B. G.P. C. H.P. D. None of these
12	Question Image	
13	If $C = \{p/p < 18, p \text{ is a prime number}\}$, then C =	A. $\{2, 3, 4, \dots, 17\}$ B. $\{2, 4, 6, 8, \dots, 16\}$ C. $\{1, 3, 5, 7, 9, 11, 13, 15, 17\}$ D. $\{3, 6, 9, 12, 15\}$
14	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the intersection is	A. an ellipse B. a hyperbola C. a circle D. a parabola
15	Question Image	
16	If n is any positive integer ,t hen $2+4+6+\dots+2n =$	A. $2^{n+1}-1$ B. $2^{n+1}+1$ C. n^2+1 D. $n(n+1)$
17	Question Image	

18 Period of $2 \cos x$ is _____

19 The law of cosines reduces to $a^2 + c^2 = b^2$ for

- A. $\alpha = 90^\circ$
 - B. $\beta = 90^\circ$
 - C. $\gamma = 90^\circ$
 - D. $\alpha + \beta + \gamma = 180^\circ$
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20 If a cone is cut by a plane perpendicular to the axis of the cone, then the section is a

- A. parabola
 - B. circle
 - C. hyperbola
 - D. ellipse
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