

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	The modulus of $12-5i$ is:	A. 7 B. 13 C. $\sqrt{7}$ D. 119
2	Question Image	
3	Question Image	A. $c = 0$ B. $c = -1$ C. $c = -2$ D. $c = 1$
4	Question Image	
5	If one root of $5x^2 + 13x + k = 0$ be the reciprocal of the other root the value of k is	A. 0 B. 2 C. 1 D. 5
6	If $-1 < x < 0$, which of the following statements must be true?	A. x & x^2 B. x & x^3 C. x^2 & x^3 D. x^2 & x
7	If $\theta = 60^\circ$ then	A. $\sin \theta = \frac{1}{2}$ B. $\tan \theta = \cot 30^\circ$ C. $\cos \theta = \frac{1}{4}$ D. $\sec \theta = 4$
8	Question Image	A. x^{39} B. $40x^{39}$ C. $40x^{41}$ D. none of these
9	Question Image	A. Only one real solution B. Exactly three real solution C. Exactly one rational solution D. Non-real roots
10	The distance of the plane $2x - 3y + 6z + 14 = 0$ from the origin is	A. 14 B. 2 C. -2 D. 11
		A. 10

11	The number of terms in the expansion of $(a + b)^9$ is	B. 11 C. 9 D. 12
12	A die is thrown, the probability that the dots on the top are prime numbers or odd numbers is	A. $1/2$ B. $2/3$ C. $1/3$ D. $2/5$
13	If $ a \times b ^2 + (a,b)^2 = \underline{\hspace{2cm}}$	A. $ a ^2 + b ^2$ B. $ a ^2 - b ^2$ C. $ a ^2 b ^2$ D. None
14	Two positive integers whose sum is 30 and their product will be maximum are	A. 12, 18 B. 10, 20 C. 15, 15 D. 14, 16
15	Let the equation $ax^2 - bx + c = 0$ have distinct real roots both lying in the open interval $(0, 1)$ where a, b, c are given to be positive integers. Then the value of the ordered triplet (a, b, c) can be	A. (5, 3, 1) B. (4, 3, 2) C. (5, 5, 1) D. (6, 4, 1)
16	The probability of getting a number between 1 and 100 which is divisible by 1 and itself if only is	A. $1/4$ B. $1/2$ C. $3/4$ D. $25/98$
17	If the focus is $F(0, -a)$ and directrix is the line $v = a$, then equation of the parabola is:	A. $x^2 = 4ay$ B. $y^2 = 4ax$ C. $y^2 = -4ax$ D. $x^2 = 4ax$
18	If $B \subseteq A$, then complement of B in A is = -----	A. $A - B$ B. $A \cap B$ C. $B - A$ D. $A \cup B$
19	Eight chairs are numbered 1 to 8. Two women and three men wish to occupy one chair each. First, the women choose the chairs from amongst the chairs marked 1 to 4 and then the men select the chairs from amongst the remaining. The number of possible arrangement is	A. ${}^6P_3 \times {}^3P_2 \times {}^4P_2$ B. ${}^4P_2 \times {}^3P_2 \times {}^4P_3$ C. ${}^4P_2 \times {}^3P_2 \times {}^6P_3$ D. None of these
20	If α, β are the roots of $ax^2 + bx + c = 0$, the equation whose roots are doubled is	A. $ay^2 + 2by + c = 0$ B. $ay^2 + 2by + 4c = 0$ C. $ay^2 + 2by + c = 0$ D. $ay^2 + by + 4c = 0$