Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	Coordinates of the focus of the parabola $x^2 - 4x - 8y - 4 = 0$ are:	A. (0,2) B. (,0,1) C. (2,0) D. (1,2)
2	Question Image	
3	If x, y, z are the pth, qth, rth terms of an A.P. and also of G.P., then $x^{y-z} \cdot y^{z-x} \cdot z^{x-y}$ eqals	A. xyz B. 0 C. 1 D. None of these
4	The set {1,-1,i,-i}	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
5	If the domain of the function f: $x \square 2x^3 + 1$ is {-1,2,3}, the range of the function is	A. {3,2,5} B. {1,3,9} C. {-1,-2,-3} D. {3,9,19}
6	Question Image	A. quadratic function B. constant function C. trigonometric function D. linear function
7	If n is odd then the middle terms in the expansion of $(a + x)^n$ are	
8	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
9	If the line $2x - y + k = 0$ is a diameter of the circle $x^2 + y^2 + 6x - 6y + 5 = 0$ then k is equal to	A. 12 B. 9 C. 6 D. 3
10	The slope of the tangent at the point (h,h) of the circle $x^2 + y^2 = a^2$ is	A. 0 B. 1 C. -1 D. h
11	Question Image	A. 2 B. 7 C. 8 D. 12
12	The solution of the quadratic equation $x^2 - 7x + 10 = 0$, is	A. 2 B. 5 C. 2,5 D. 7
13	In common logarithm the base is	A. 1 B. 0 C. 10 D. e
14	If C={p/p < 18, p is a prime number}, then C =	A. {2,3,4,.........17} B. {2,4,6,8...............16} C. {1,3,5,7,9,11,13,15,17} D. {3,6,9,12,15}
15	Two cards are drawn at random from a well shuffled pack of cards. The probability that at least one of them is a face card is	A. 3 / 17 B. 5 / 17 C. 7 / 17 D. 9 / 17
16	The point which divides the line joining the points (2, 4, 5) and (3, 5, -4) in the ratio -2 : 3 lines on	A. ZOX plane B. XOY plane C. YOZ plane D. None of these

17	The equation of the circle with centre origin and radius r is	A. $x^2 + y^2 = 1$ B. $x^2 + y^2 = r^2$ C. $x^2 + y^2 = 0$ D. $x^2 - y^2 = r^2$
18	Question Image	
19	The maximum value of the quadratic function $f(x) = -2x^2 + 20x$, is	A. 4 B. 3 C. 50 D. 7
20	$\int x \sin x \, dx$ is equal to:	A. $\sin x/x + \cos x$ B. $\sin x - \cos x/x$ C. $x \cos x + \sin x$ D. $-x \cos x + \sin x$