

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	A function $f(x)$ is said to be the periodic function if for all x in the domain of f , there exists a smallest positive number p such the $f(x + p) = \underline{\hspace{2cm}}$	A. $f(p)$ B. $f(x)$ C. $f(o)$ D. None of these
2	A stationary point x is a relative extrema of $y = f(x)$ is	A. $f''(x) > 0$ B. $f''(x) < 0$ C. $f''(x) \neq 0$ D. $f''(x) = 0$
3	Five engineering, four mathematics, two chemistry books are placed on a table at random. The probability that the books of each kind are all together is	
4	Question Image	
5	If $f(x) = ax^2$, and $a > 0$, then the lowest point on the parabola is called.	A. Vertex of parabola B. Co-ordinates of parabola C. Roots of the equation D. Coefficient of the equation
6	The quadratic equation $8 \sec^2\theta - 6 \sec\theta + 1 = 0$ has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
7	Question Image	B. $\tan 3x + c$ C. $\cot 3x + c$ D. $-\cot 3x + c$
8	If $f(x) = x^2 - x$ then $f(-2)$ is	A. 4 B. 6 C. 2 D. 0
9	The locus of the centre of a circle which touches two given circles externally is:	A. a hyperbola B. an ellipse C. a circle D. a parabola
10	Which is in the solution set of $4x - 3y < 2$	A. (3, 0) B. (4, 1) C. (1, 3) D. None
11	The modulus of $12 - 5i$ is:	A. 7 B. 13 C. $\sqrt{7}$ D. 119
12	The sum of first twenty odd integers in A.P is	A. 400 B. 397 C. 404 D. 408
13	If (0, 0) and (0, -1) are end points of a diameter, then the equation of the circle is	
14	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
15	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. $\alpha + \beta + \gamma = 180^\circ$
16	The points of intersection of the line $y = 2x - 3$ and the circle $x^2 + y^2 - 3x - 2y - 3 = 0$ are:	A. two B. three C. less than two D. not intersect
17	The tangents drawn from the point P to a circle are imaginary if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. None

		D. none of these
18	Union of the sets of rational and irrational numbers is called 6th set of	A. Natural numbers B. Real numbers C. Whole numbers D. Prime numbers
19	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)
20	If $A \cap B = B$, then $n(A \cap B)$ is equal to	A. $n(a)$ B. $n(a) + n(c)$ C. $n(c)$ D. None of these