

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	In ladder leaning against a vertical wall makes an angle of 24° with the wall, its foot is 5m from the wall, its length is	A. 5.47m B. 2m C. 7m D. 6.29m
2	$\cos^{-1}(\cos x) =$	A. x B. $\cos x$ C. $x = 1/x$ D. $\cos^{-2} x$
3	Archimedes approximate the function by horizontal function and the area under f by the sum of small	A. Parallelograms B. Squares C. Rectangles D. Polygons
4	Question Image	D. none of these
5	Question Image	C. 2x D. 2
6	Question Image	
7	The negative square root of 9 can be written as:	A. $-\sqrt{9}$ B. $\sqrt{9}$ C. $\sqrt{18}$ D. $-\sqrt{18}$
8	The no of term is the expansion of $(a+x)^{n-1}$ is	A. n+1 B. n-1 C. n D. n-2
9	$\cos^{-1}(-x) =$	A. -x B. $1/x$ C. $\tan^{-1} x$ D. $\pi - \cos^{-1} x$
10	Derivative of x^3 w.r.t x is	A. 0 B. 1 C. $3x^2$ D. x^3
11	The expansion $(1+x)^{-3}$ holds when	A. $ x \geq 1$ B. $ x < 1$ C. $x \leq 1$ D. $x \geq 1$
12	The unit vector along x-axis is	D. none of these
13	If $x+y+z+\dots+2n = 2n+1-1 \forall n \in W$, then cube root of xyz is equal to	A. 1 B. 4 C. 2 D. 8
14	Question Image	D. none of these
15	Identity w.r.t intersection in a power set of any set is	A. \emptyset B. Set itself C. Singleton set D. $\{0\}$
16	If (0, 0) and (1, 0) are the end points of a diameter, then the equation of the circle is	
17	The point on $y^2 = 4ax$ nearest to the focus has its abscissa equal to	A. -a B. a C. $a/2$ D. 0
18	The set of real numbers is a subset of	A. The set of natural numbers B. The set of rational numbers C. The set of integers D. The set of complex numbers
19	If $a^2 + b^2 = 10$ and $a^2 - b^2 = 34$ then	A. a = -10, b = 34 B. a = 10, b = 34 C. a = -10, b = -34 D. a = 10, b = -34

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If $y = e^{ax} \sin bx$ and $y'' - 2ay' + (a^2 + b^2)y = 0$ then for what values of a and b we have $y'' + 10y' + 34y = 0$

- B. $a=-5, b=3$
C. $a=5, b=3$
D. $a=10, b=34$

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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