Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	A tower subtends an angleαat a point on the same level as the root of the tower and at a second point, b meters above the first, the angle of depression of the foot of the tower isβ. The height of the tower is	A. b cotαtanβ B. b tanαtanβ C. b tanαcotβ D. None of these
2	x = r2, y = 1 are the parametric equation of	A. Circle B. Hyperbola C. Ellipse D. Parabola
3	The equation of a line parallel to the tangent to the circle $x^2+ y^2= 16$ at the point (2, 3) and passing thro' the origin is	A. 2x + 3y = 0 B. 2x - 3y = 0 C. 3x + 2y = 0 D. 3x - 2y = 0
4	The distance s of a particle in time t is given by $s = t^3- 6t^2- 4t - 8$. Its acceleration vanishes at t =	A. 1 B. 2 C. 3 D. 4
5	Question Image	
6	Question Image	
7	Question Image	A. 0 C. 1
8	A prime number can be a factor of a square only if it occurs in the square at least	A. Once B. Thirce C. Twice D. None of these
9	The equation of motion of a stone thrown vertically up wards is $s = ut - 4.9t^2$the maximum height attained by it =	
10	If A = [aij]mxpand B =[aij]pxnthen order of BA is	A. m x n B. p x n C. n x m D. None of these
11	If y=sin(ax+b) then y4=_____:	A. sin4(ax+b) B. a4sin(ax+b) C. a4cos(ax+b) D. None of these
12	The greatest term in the expansion of $(3+2x)^9$, when x=1 is	A. 4th B. 4th and 5th C. 5th D. 6th
13	The sum of first n even number is	A. n2 B. n(n+1) C. n+1 D. n+2
		A. ay2 +2by+c=0

14	If a,β are the roots of ax2+bx+c=0,the equation whose roots are doubled is	B. ay2+2by+4c=0 C. ay2+2by+c=0 D. ay2+by+4c=0
15	(n + 2) (n + 1) n= _____	
16	For all points (x,y) in second quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
17	Question Image	B. 6x + 2 + c C. 6x + x²+ c D. 6x³+ x²+ x
18	The quadratic equation 8 $\sec^2\theta$- 6 secθ+1 = 0 has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
19	The5thand 13th terms of an A.P are 5 and-3 respectively The first term of the A.P is	A. 1 B. -15 C. 9 D. 2
20	In a school, there are 150 students. Out of these 80 students enrolled for mathematics class, 50 enrolled for English class, and 60 enrolled for Physics class. The students enrolled for English cannot any other class, but the students of mathematics and Physics can take two courses at a time. Find the number of students who have taken both physics and mathematics	A. 40 B. 30 C. 50 D. 20