

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
2	Question Image	
3	The line through the focus and perpendicular to the directrix is called _____ of the parabola	A. axis B. focal chord C. tangent D. latus rectum
4	If $\sin x + \sin^2 x = 1$ , then the value of $\cos^{12} x + 3\cos^{10} x + 3\cos^8 x + \cos^6 x + 2\cos^4 x + \cos^2 x - 2$ is equal to	A. 0 B. 1 C. 2 D. $\sin^2 x$
5	$\Phi$ set is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection
6	Question Image	
7	The angle of depression of the point at a distance 70 meters from the foot of the tower from the top of the tower is $45^\circ$ . The height of the tower is	A. 37m B. 97m C. 101m D. 70m
8	Question Image	
9	If the lines $2x-3y-1=0$ , $3x-y-5=0$ and $3x+py+8=0$ meet at a unique point then	A. $p = -14$ B. $p = -1$ C. $p = 0$ D. $p = 12$
10	If $a_n = 2n - 3$ , write the first four terms	A. -3, -1, 1, 3 B. 1, 3, 5, 7 C. -1, 1, 3, 5 D. None of these
11	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
12	Range of $\tan x$ is _____	A. $[-1, -]$ B. $\mathbb{R}$ C. Negative real numbers D. $\mathbb{R} - \{x \mid -1 \leq x \leq 1\}$
13	The maximum value of $12 \sin \theta - 9 \sin^2 \theta$ is x	A. 3 B. 4 C. 5 D. None of these
14	-2, 1, 4, 7, .... is _____	A. Harmonic sequence B. Arithmetic sequence C. Geometric sequence D. Arithmetic series
15	Question Image	D. none of these
16	Question Image	
17	Question Image	
18	Question Image	A. 16 / 7 B. 6 / 17 C. 7 / 16 D. None of these

A. (ac, bd)

19 The product of complex numbers  $(a,b)$  and  $(c,d)$  is

- B.  $(ac-bd, ad+bc)$
- C.  $(ab,cd)$
- D.  $(ac+bd,ad-bc)$

20 A \_\_\_\_\_ divides the plane into left and right half planes.

- A. Vertical line
- B. Horizontal line
- C. Non vertical line
- D. Inequality