

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	Question Image	
2	Question Image	D. none of these
3	Question Image	
4	The equation $(\cos p - 1)x^2 + x(\cos p) + \sin p = 0$ in the variable $x$ , has real roots, then $p$ can take any value in the interval	<p>A. <math>(0, 2\pi)</math></p> <p>B. <math>(-\pi, \pi)</math></p> <p>C. <math>(0, \pi)</math></p> <p>D. None of these</p>
5	The contra positive of $p \rightarrow q$ is	<p>A. <math>q \rightarrow p</math></p> <p>B. <math>\sim q \rightarrow \sim p</math></p> <p>C. <math>\sim p \rightarrow \sim q</math></p> <p>D. None of these</p>
6	If $a = [1, 4, 3]$ and $B = [2, -1, 5]$ then the mid point M of AB is:	<p>A. <math>[1, 1, 1.5]</math></p> <p>B. <math>[2, 2, 1.5]</math></p> <p>C. <math>[1.5, 1.5, 4]</math></p> <p>D. None of these</p>
7	If $a^x = b^y = c^z$ and $a, b, c$ are in G.P. then $x, y, z$ are in	<p>A. A.P.</p> <p>B. G.P.</p> <p>C. H.P.</p> <p>D. None of these</p>
8	The sixth term of the sequence 1, 3, 12, 60... is	<p>A. 1500</p> <p>B. 72</p> <p>C. 2160</p> <p>D. 2520</p>
9	The range of function $f(x) = -x^2 + 2x - 1$ is	<p>A. R</p> <p>B. <math>(-\infty, 0]</math></p> <p>C. <math>(-\infty, 1]</math></p> <p>D. <math>[0, \infty)</math></p>
10	Question Image	
11	Question Image	<p>C. <math>x^2 + 2x + c</math></p> <p>D. <math>(x^2 + 2x - 1)^4 + c</math></p>
12	Question Image	<p>A. <math>\sec x \tan x</math></p> <p>B. <math>\cos^2 x</math></p> <p>C. <math>\sin^2 x</math></p> <p>D. <math>\sec^2 x</math></p>
13	Area of the triangle whose vertices are $(2, 3), (0, 1), (0, 0)$ is	<p>A. 6</p> <p>B. 2</p> <p>C. 4</p> <p>D. 1</p>
14	$\sec 30^\circ =$ _____	
15	Question Image	
16	Question Image	
17	Question Image	D. none of these

18  $\cos 2\alpha =$

- A.  $1 - 2 \sin^2 \alpha$
- B.  $\sin^2 \alpha + \cos^2 \alpha$
- C.  $\sin^2 \alpha - \cos^2 \alpha$
- D. None of these

19 Question Image

20  $A = B$  if

D. A is equivalent to B