

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	If $f(x) = \tan x$ then $f(0)$ is	A. 0 B. 1 C. $1/2$
2	Which of the following has the same value as $i^{113}$ ?	A. i B. -1 C. -i D. 1
3	The sum of first n even number is	A. $n^2$ B. $n(n+1)$ C. $n+1$ D. $n+2$
4	Question Image	
5	$\cos(\pi/2 - \theta) =$ _____;	A. $\cos\theta$ B. $\sin\theta$ C. $-\cos\theta$ D. $-\sin\theta$
6	Question Image	A. 0 B. 1 D. -1
7	Question Image	A. $a^{x^x}$ B. $a^{x \cdot x \cdot \ln a}$
8	An A.P., a G.P. and a H.P. have the same first and last terms and the same odd numbers of terms, the middle terms of the three series are in	A. A.P. B. G.P. C. H.P. D. None of these
9	The set $\{\{a,b\}\}$ is	A. Infinite set B. Singleton set C. Two points set D. None
10	The period of $\tan x/7$ is	A. $3\pi$ B. $7\pi$ C. $15\pi$ D. $5\pi$
11	Question Image	A. $x^{3^3}$ B. $3x^{2^2}$ C. $3x$ D. 3
12	If distance between (3,b) and (0,0) is 3 then b = _____	A. 3 C. 9 D. 0
13	$\cos^{-1}(-x) =$	A. -x B. $1/x$ C. $\tan^{-1} x$ D. $\pi - \cos^{-1} x$
14	If p, q, r and in A.P., a is G.M. between p and q and b is G.M. between q and r, then $a^2, q^2, b^2$ are in	A. A.P. B. G.P. C. H.P. D. None of these
15	(1,0) is in the solution of the inequality	A. $3x + 2y \geq 8$ B. $2x - 3y \leq 4$ C. $2x + 3y \geq 3$ D. $x - 2y \leq -5$
16	Two circle $x^2 + y^2 + 2x - 8 = 0$ and $x^2 + y^2 - 6 + 6x - 46 = 0$ :	A. touch internally B. do not intersect C. touch externally D. None of these
17	Question Image	

A. A complex number

18  $\pi$  is \_\_\_\_\_

- A. A complex number  
B. A rational number  
C. A natural number  
D. An irrational number

19  $f(x)g(x) - \int g(x) f'(x) dx$  is equal to

- A.  $\int f(x)g'(x)dx$   
B.  $\int f'(x)g(x)dx$   
C.  $\int f'(x)g(x)'dx$   
D.  $\int f(x)g(x)dx$

20 The line  $2x + \sqrt{6}y = 2$  is a tangent to the curve  $x^2 - 2y^2 = 4$  The point of contact is

- A.  $(\sqrt{6}, 1)$   
B.  $(2, 3)$   
C.  $(7, -2\sqrt{6})$   
D.  $(4, -\sqrt{6})$