

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	$\int \sin(ax+b) dx$ is equal to:	A. $\frac{1}{2a} \cos(ax + b)$ B. $-\frac{1}{a} \cos(ax + b)$ C. $\frac{1}{a} \cos(ax + b)$ D. $\frac{1}{a} \ln(ax + b)$
2	$\sin 3a = \underline{\hspace{2cm}}$ ;	A. $3\sin a - 4\sin^3 a$ B. $4\sin a - 3\sin^3 a$ C. $3 \cos^3 a - \cos a$ D. $4\cos^3 a - 3\cos a$
3		A. 8 B. 9 C. 10 D. 11
4	A and B be two square matrices and if their inverse exist the $(AB)^{-1} =$	A. $A^{-1} B^{-1}$ B. $AB^{-1}$ C. $A^{-1} B$ D. $B^{-1} A^{-1}$
5	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
6		
7	For all points (x,y) on y-axis	A. x is positive B. x = 0 C. x is negative D. y = 0
8	Which of the following sets has closure property w.r.t. addition	A. $\{0\}$ B. $\{1\}$ C. $\{0, -1\}$ D. $\{1, -1\}$
9	The set of real roots of the equation $\log_{(5x+4)}(2x+3)^3 - \log_{(2x+3)}(10x^2+23x+12) = 1$ is	A. $\{-1\}$ B. $\{-3/5\}$ C. Empty set D. $\{-1/3\}$
10	If S is a sample space and event set $E = \Phi$ then $P(E)$ is	A. $>0$ B. 1 C. $<1$ D. 0
11		A. Two real roots B. Two positive roots C. Two negative roots D. One positive and one negative root
12		
13	$(ABC)' =$	A. $CBA'$ B. $CBA$ C. $C'B'A$ D. $C'B'A'$
14	The general term of a sequence is denoted by	A. $a_{n-1}$ B. $a_n$ C. n D. $s_n$
15	For a positive integer n	A. $n! = n(n+1)$ B. $n! = n(n+1)!$ C. $n! = n(n-1)$ D. $n! = n(n-1)!$
16		
17	An equation of the form $ax + by = k$ is homogeneous linear equation when	A. $b = 0, a = 0$ B. $a = 0, b \neq 0$

17. An equation of the form  $ax + by = k$  is homogeneous linear equation when

- C.  $b = -0, a \neq 0$
- D.  $a \neq 0, b \neq 0, k = 0$

18. An open sentence formed by using the sign of equality "=" is called

- A. Equation
- B. In equation
- C. True sentence
- D. False sentence

19.  $(2 + w)(2 + w^2) = \underline{\hspace{2cm}}$

- A. 1
- B. 2
- C. 3
- D. 0

20. If  $n$  is any positive integer then  $n^2 > n + 3$  for