

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	<input type="text" value="Question Image"/>	A. $a^x$ B. $a^x \ln a$
2	<input type="text" value="Question Image"/>	
3	<input type="text" value="Question Image"/>	B. $\ln(x^2 - x + 1) - 4 + c$
4	For $f(x) = x^2 + px + 1$ , if $f(3) = 3$ then $P =$	A. $\frac{3}{7}$ B. $-\frac{2}{5}$ C. $-\frac{7}{5}$ D. $-\frac{7}{3}$
5	If distance between $(a,2)$ and $(0,0)$ is 2 then $a =$ _____	A. 0 B. 2 C. 4
6	If $B = \{x \in \mathbb{Z} \mid -3 < x < 6\}$ , then $n(B) =$	A. 5 B. $\{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$ C. 8 D. 9
7	<input type="text" value="Question Image"/>	
8	The period of the function $\csc \frac{x}{4}$ is	A. $4x$ B. $\frac{\pi}{4}$ C. $8\pi$ D. $\frac{\pi}{8}$
9	$\sin(\alpha - \beta) =$	<p>A. <math>\sin \alpha \cos \beta - \cos \alpha \sin \beta</math></p> <p>B. <math>\sin \alpha \cos \beta + \cos \alpha \sin \beta</math></p> <p>C. <math>\sin \alpha \cos \beta - \sin \alpha \cos \beta</math></p> <p>D. <math>\sin \alpha \cos \beta + \sin \alpha \cos \beta</math></p>

center; >α</i>- cos<i style= text-align: center;">β</i>sin<span style="font-family: &quot;Times New Roman&quot;; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);"><i>β</i></span>

10 If A and B are two sets then intersection of A and B is denoted by

11

12 The tangents drawn from the point P to a circle are real and coincident if

- A. P is on the circle
- B. P is inside the circle
- C. P is outside the circle
- D. none of these

13

14

15 Let A,B and C be any sets such that  $A \cup B = A \cup C$  and  $A \cap B = A \cap C$  then

- A.  $A = B$
- B.  $B = C$
- C.  $A \neq C$
- D.  $A \neq B$

16 Range of  $\cos x$  is \_\_\_\_\_

- A.  $[-1, 1]$
- B.  $\mathbb{R}$
- C. Negative real numbers
- D.  $\mathbb{R} - \{x \mid -1 \leq x \leq 1\}$

17 If the 4th term in the expansion of  $(px + x^{-1})^m$  is 2.5 for all  $x \in \mathbb{R}$ , then

18

- D. none of these

19  $y=0$  of the parabola  $y^2 = 4ax$  is the

- A. equation of directrix
- B. Equation of the tangent
- C. Equation of axis
- D. equation of latus rectum

20 The multiplicative inverse of  $x$  such that  $x = 0$  is

- A.  $-x$
- B. Does not exist
- C.  $1/x$
- D.  $\pm 1$