

## Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	If $f(x) = x^2 - x$ then $f(0)$ is	A. 0 B. 1 C. 2 D. 3
2	The $n$ th term of a G.P. is	A. $a^{n-1}r^n$ B. $a^{n-1}r^{n+1}$ C. $a^{n-1}r^{n-1}$ D. $a^{n-1}r^{-n}$
3	An expression involving any of the symbols $<$ , $>$ , $\leq$ or $\geq$ is called	A. equation B. inequality C. linear equation D. identity
4	The familiar plane curves, namely circle, ellipse, parabola and hyperbola are called:	A. cones B. conics C. nappes D. apex
5		A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule for fractions D. Rule for quotient of fractions
6	$i$ is equal	A. (1, 0) B. (0, 1) C. (1, 1) D. (0, 0)
7	Area of the circle with ends of a diameter at (-3,2) and (5,-6)	A. $128\pi$ sq. units B. $64\pi$ sq. units C. $32\pi$ sq. units D. None of these
8	$\sin(\alpha + \beta) =$	A. $\sin\alpha\cos\beta + \cos\alpha\sin\beta$ B. $\sin\alpha\cos\beta - \cos\alpha\sin\beta$ C. $\sin\alpha\cos\beta + \sin\alpha\sin\beta$ D. $\sin\alpha\cos\beta - \sin\alpha\sin\beta$

C.  $\sin\alpha - \cos\beta$   
 &quot;Times New Roman&quot;; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);></i></span>  
 </span> $\cos\alpha - \cos\beta$   
 center;></i>-  $\cos\alpha - \cos\beta$   
 center;></i> $\sin\alpha - \sin\beta$   
 &quot;Times New Roman&quot;; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);></i></span>  
 D.  $\sin\alpha - \cos\beta$   
 &quot;Times New Roman&quot;; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);></i></span>  
 &quot;Times New Roman&quot;; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);></i></span>  
 </span> $\cos\alpha + \cos\beta$   
 center;></i>+  $\cos\alpha + \cos\beta$   
 center;></i> $\sin\alpha - \sin\beta$   
 &quot;Times New Roman&quot;; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);></i></span>  
 ></i></span> $\sin\alpha - \cos\beta$   
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9	If $\theta$ be angle between $u, v$ and $u, v$ determine the sides of a triangle then the third side opposite to angle $\theta$ has length	A. $ u+v $ B. $ u + v $ C. $ u-v $ D. $  u - v  $
10	Question Image	A. $\frac{\pi}{4}$ B. $\frac{\pi}{6}$ C. $\frac{\pi}{3}$ D. 0
11	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ is equal to	A. $\frac{1}{2} \cos^{-1}(3/5)$ B. $\frac{1}{2} \sin^{-1}(3/5)$ C. $\frac{1}{2} \tan^{-1}(3/5)$ D. $\tan^{-1}1/2$
12	Question Image	
13	Question Image	A. $10^6 C^6$ B. $10^5 C^5$ C. $10^4 C^4$ D. None
14	Question Image	A. 0 B. 1 C. -2 D. 10
15	The slope of the normal at $(5 \cos \theta, 5 \sin \theta)$ to the circle. $x^2 + y^2 = 25$ is:	A. $\tan \theta$ B. $\cos \theta / \sin \theta$ C. $-\cot \theta$ D. $-\tan \theta$
16	Question Image	D. none of these
17	Apollonius was a:	A. Rocket B. Muslims scientist C. Greek mathematicians D. Method of finding conics
18	The exact degree value of the function $\sin^{-1}(-\sqrt{3}/2)$ is	A. $70^\circ$ B. $50^\circ$ C. $90^\circ$ D. $60^\circ$
19	Trivial solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a, b and c
20	If the graph of $f$ is entirely below the $x$ -axis, then the value of definite integral is	A. = 0 B. &lt; 0 C. &gt; 0 D. None