

## Mathematics General Science Test Medium Mode

| Sr | Questions   | Answers Choice   |
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| 1  | The numbers of $G_1, G_2, G_3, \dots, G_n$ are called $n$ geometric means between $a$ and $b$ is $a, G_1, G_2, G_3, \dots, G_n, b$ are in   | A. H.P.<br>B. A.P.<br>C. G.P.<br>D. None of these  |
| 2  | Question Image <input type="text"/>   | A. $30^\circ$<br>B. $45^\circ$<br>C. $60^\circ$<br>D. $75^\circ$   |
| 3  | $i =$   |  |
| 4  | The period $\sin^2 \theta$ is   | A. $\pi$<br>B. $\frac{\pi}{2}$<br>C. $2\pi$<br>D. $\frac{\pi}{4}$  |
| 5  | The difference of two consecutive terms of an A.P. is called _____  | A. General term<br>B. Common ratio<br>C. Common difference<br>D. None of these   |
| 6  | Question Image <input type="text"/>   | A. $\frac{1}{2}$<br>B. $\frac{1}{3}$<br>C. $\frac{1}{4}$<br>D. None of these   |
| 7  | If $a, b, c$ are in A.P., $a, b, c$ are in G.P. then $A, m^2b, c$ are in  | A. A.P.<br>B. G.P.<br>C. H.P.<br>D. None of these  |
| 8  | In the expansion of $(a + x)^n$ the general term $T_{r+1}$ is   |  |
| 9  | The parabola $y^2 = x$ is symmetric about   | A. x-axis<br>B. y-axis<br>C. Both x and y-axis<br>D. The line $y = x$  |
| 10 | The exact value of $\cos^{-1}(0)$ is  | A. $\frac{\pi}{2}$<br>B. $-\frac{\pi}{2}$<br>C. $3\pi$<br>D. $\pi - \frac{\pi}{6}$   |
| 11 | $p, q, r$ and $s$ are integers. If the A.M. of the roots of $x^2 - px + q = 0$ and G.M. of the roots of $x^2 - rx + s = 0$ are equal, then  | A. $q$ is an odd integer<br>B. $r$ is an even integer<br>C. $p$ is an even integer<br>D. $s$ is an odd integer   |
| 12 | A chimney is such that on walking towards it 50 m in a horizontal line through its base the angular elevation of its top changes from $30^\circ$ to $45^\circ$ . The height of the chimney is |  |
| 13 | Question Image <input type="text"/>   | A. Identity matrix<br>B. Diagonal matrix<br>C. Null matrix<br>D. Hermitian matrix  |
| 14 | A conjunction of two statement $p$ and $q$ is true only if  | A. $p$ is true<br>B. $q$ is true<br>C. Both $p$ and $q$ are true<br>D. both $p$ and $q$ are false  |
| 15 | The set of complex numbers forms  | A. Commutative group w.r.t addition<br>B. Commutative group w.r.t multiplication<br>C. Commutative group w.r.t division<br>D. Non commutative group w.r.t addition |
| 16 | $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ may represent an ellipse if  | A. $h^2 - ab < 0$<br>B. $h^2 - ab \neq 0$<br>C. $h^2 - ab = 0$<br>D. $h^2 - ab > 0$  |

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17 Question Image

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18 Question Image

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19 The 26th term of the A.P -2,-4,10,.....is

- A. 136  
B. -136  
C. 148  
D. -148

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20 The slope of the normal at (4,3) to the circle  $x^2+y^2=25$  is

- A.  $\frac{3}{4}$   
B.  $-\frac{3}{4}$   
C.  $\frac{4}{3}$   
D.  $-\frac{4}{3}$
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