

## Mathematics General Science Test Medium Mode

| Sr | Questions  | Answers Choice   |
|----|--|--|
| 1  | Question Image   |  |
| 2  | Form a group of 5 men and 3 women, a committee of 4 persons is to be selected randomly. The probability that there is a majority of men is | A. 1/4<br>B. 1/3<br>C. 1/2<br>D. 1/6   |
| 3  | Question Image   |  |
| 4  | Composition of functions is  | A. Non-commutative ( $fg \neq gf$ )<br>B. non-associative [ $8(fh) \neq (8f)h$ ]<br>C. Commutative ( $fg = gf$ )<br>D. f of-1 $\neq 1$ |
| 5  | $\vec{O}(0,0)$ is called:  | A. Position vector<br>B. Free vector<br>C. Unite vector<br>D. Null vector  |
| 6  | Question Image   |  |
| 7  | The slope of the tangent at the point (h,h) of the circle $x^2 + y^2 = a^2$ is   | A. 0<br>B. 1<br>C. -1<br>D. h  |
| 8  | Question Image   | A. G.P<br>B. H.P.<br>C. A.P.<br>D. No particular sequence  |
| 9  | If x, y, z are the pth, qth, rth terms of an A.P. and also of G.P., then $x^{y-z} \cdot y^{z-x} \cdot z^{x-y}$ equals                      | A. xyz<br>B. 0<br>C. 1<br>D. None of these   |
| 10 | The roots of $ax^2 + bx + c = 0$ are always unequal if   | A. $b^2 - 4ac = 0$<br>B. $b^2 - 4ac \neq 0$<br>C. $b^2 - 4ac > 0$<br>D. $b^2 - 4ac \geq 0$   |
| 11 | Which element is the additive inverse of (a,b) in Complex numbers  | A. (a,0)<br>B. (0,b)<br>C. (a,b)<br>D. (-a,-b)   |
| 12 | Name the property used in $1000 \times 1 = 1000$   | A. additive inverse<br>B. multiplicative inverse<br>C. additive identity<br>D. multiplicative identity                                 |
| 13 | Question Image   |  |
| 14 | If $a_n = 2n - 3$ , write the first four terms   | A. -3, -1, 1, 3<br>B. 1, 3, 5, 7<br>C. -1, 1, 3, 5<br>D. None of these   |
| 15 | The area bounded by $y = x(x^2 - 4)$ and below x - axis is   | A. 4<br>B. 0<br>C. -4<br>D. 8  |
| 16 | If the line $2x - y + k = 0$ is a diameter of the circle $x^2 + y^2 + 6x - 6y + 5 = 0$ then k is equal to                                  | A. 12<br>B. 9<br>C. 6<br>D. 3  |
| 17 | The period of $\tan x/7$ is  | A. $3\pi$<br>B. $7\pi$<br>C. $15\pi$<br>D. $5\pi$  |

A.  $(n+2)^{2 \times 2}$

18 For  $\geq -2$  ,  $1+3+5+\dots+(2n+5)$

- B.  $(n-2)^2$   
C.  $2n+1$   
D.  $(n+3)^2$

19 Question Image

20 Question Image

- A. 15  
B. 15 i  
C. -15 i  
D. -15