## Mathematics General Science Test Medium Mode

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | $3x + 4 \geq 0$ is | A. equation<br>B. inequality<br>C. identity<br>D. none of these |
| 2 | $\forall a,b,c \in R$ and $c>0$, then | A. $a > b \Rightarrow ac < bc$<br>B. $a > b \Rightarrow ac > bc$<br>C. $a < b \Rightarrow ac > bc$<br>D. None of these |
| 3 | Which of the following is factor of $x11+a11$, where n is an odd integer | A. x-a<br>B. x+a<br>C. 2x-a<br>D. 2x+a |
| 4 | For $f(x) = x^2 + px +1$, if $f(3) = 3$ then $P =$ | A. 3/7<br>B. -2/5<br>C. -7/5<br>D. -7/3 |
| 5 | If $y = \sin(ax + b)$, then fourth derivative of y with respect to x = | A. $a^4\cos(ax + b)$<br>B. $a^4\sin(ax + b)$<br>C. $-a^4\sin(ax + b)$<br>D. $a^4\tan(ax + b)$ |
| 6 | Question Image | B. $a^x \ln a + c$<br>C. $a^x + c$<br>D. $x\, a^x + c$ |
| 7 | Circumcentre of the triangle, whose vertices are (0, 0), (6, 0) and (0, 4) is | A. (2, 0)<br>B. (3, 0)<br>C. (0, 3)<br>D. (3, 2) |
| 8 | Question Image | A. Associative law of addition<br>B. Commutative law of addition<br>C. Additive identity<br>D. Closure law of addition |
| 9 | Question Image | |
| 10 | If in a set of real no a is multiplicative identity then | A. $a,a = a^2$<br>B. $a,a = 1$<br>C. $a,a = 0$<br>D. None of these |
| 11 | The nth term of an A.P is $(3n+5)$ Its 75th term is | A. 26<br>B. 7<br>C. 21<br>D. Cannot be determined |
| 12 | The 6th term of the sequence 7,9,12,16......is | A. 27<br>B. 32<br>C. 20<br>D. 19 |
| 13 | The consecutive terms of a progressions are 30, 24, 20. The next term of the progression is | |
| 14 | Question Image | |
| 15 | Question Image | |
| 16 | n different objects can be arranged taken all at a time in _____ | A. (n + 1)! ways<br>B. (n - 1)! ways<br>C. n! ways<br>D. n ways |
| 17 | There is no integer n for which $3^n$ is | A. Odd<br>B. even<br>C. Natural<br>D. Prime |
| 18 | If the graph of f is entirely below the x-axis, then the value of definite integral is | A. = 0<br>B. < 0<br>C. > 0 |

| 19 | Question Image | |
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| 20 | For each even natural number n $(n^2-1)$ is divisible by | A. 6<br>B. 3<br>C. 4<br>D. 8 |

C. &gt; 0
D. None

A. 6
B. 3
C. 4
D. 8