

## ECAT Pre General Science Mathematics Chapter 8 Sequences and Series Online Test

| Sr | Questions   | Answers Choice   |
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| 1  | Find the next two terms of 7, 9, 12, 16,...   | A. 18, 20<br>B. 19, 22<br>C. 20, 25<br>D. 21, 27                                     |
| 2  | Question Image  |  |
| 3  | 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               |
| 4  | A function whose domain is a subset of natural numbers is called _____                  | A. Identity function<br>B. Sequence<br>C. Onto function<br>D. Series                 |
| 5  | If $\#n = (n-5)2 + 5$ , then find $\#3 \times \#4$ .                                    | A. 54<br>B. 12<br>C. 4<br>D. 9   |
| 6  | The sides of a right angled triangle are in A.P The ratio of sides is                   | A. 1:2:3<br>B. 3:4:5<br>C. 2:3:4<br>D. 5:8:3   |
| 7  | 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                                    |
| 8  | The 5th and 13th terms of an A.P are 5 and -3 respectively The first term of the A.P is | A. 1<br>B. -15<br>C. 9<br>D. 2   |
| 9  | Which term of the A.P 5, 8, 11, 14, ..... is 320  | A. 104th<br>B. 106th<br>C. 105th<br>D. 64th  |
| 10 | The sum of all 2 digit number is  | A. 4750<br>B. 3776<br>C. 4895<br>D. 4905   |
| 11 | The sum of first 60 natural numbers is  | A. 1830<br>B. 3660<br>C. 1640<br>D. 1770   |
| 12 | How many numbers are there between 103 and 750 which are divisible by 6                 | A. 125<br>B. 107<br>C. 108<br>D. 113   |
| 13 | For an A.P common difference d  | A. Can be zero<br>B. May or may not be zero<br>C. Cannot be zero<br>D. None of these |
| 14 | For an arithmetic series to be convergent it is necessary that the series has           | A. Finite terms<br>B. $d \neq 0$<br>C. Infinite terms<br>D. None of these            |
| 15 | An infinite arithmetic series is always   | A. Convergent<br>B. Oscillatory<br>C. Divergent<br>D. None of these                  |
| 16 | If $S_n$ is a definite number as $n \rightarrow \infty$ , then the geometric series is  | A. Convergent<br>B. Divergent<br>C. Oscillatory                                      |

|    |  |   |
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|    |  | D. None of these  |
| 17 | The sum of infinite numbers of terms of an arithmetic series is            | A. Finite<br>B. Infinite<br>C. May or may not finite<br>D. None of these  |
| 18 | The sum of indicated terms of a sequence is called                         | A. Arithmetic series<br>B. Series<br>C. Harmonic series<br>D. None of these   |
| 19 | $a_n - a_{n-1}$ will be common difference in an A.P if                     | A. $n = 1 \forall n \in \mathbb{N}$<br>B. $n \geq 1 \wedge n \in \mathbb{N}$<br>C. $n \in \mathbb{Z}$<br>D. None of the above |
| 20 | For three consecutive terms in A.P middle term is called                   | A. A.M<br>B. nth term<br>C. Central term<br>D. None of these  |
| 21 | If A is such that a,A,B are in A.P then A is called                        | A. A.M<br>B. Common ratio<br>C. Common difference<br>D. None of these   |
| 22 | In an A.P, $a + (n-a)d$ is   | A. 1st term<br>B. General term<br>C. Last term<br>D. None of these  |
| 23 | $a_n - a_{n-1}, \forall n \in \mathbb{N} \wedge n > 1$ in an A.P is called | A. Common difference<br>B. nth term<br>C. Common ratio<br>D. None of these  |
| 24 | If all members of a sequence are real numbers then it is called            | A. A.P<br>B. Real Sequence<br>C. G.P<br>D. None of these  |
| 25 | If x,y are two -ve distinct numbers then                                   | A. $A \geq G \geq H$<br>B. $A \leq G \leq H$<br>C. $A = G = H$<br>D. None of these  |
| 26 | If x,y are two positive distinct numbers then                              | A. $A \geq G \geq H$<br>B. $A \leq G \leq H$<br>C. $A = G = H$<br>D. None of these  |
| 27 | A,G,H are in   | A. A.P<br>B. G.P<br>C. H.P<br>D. None of these  |
| 28 | A sequence whose reciprocal is an A.P is called                            | A. Oscillator<br>B. H.P<br>C. G.P<br>D. None of these   |
| 29 | A Series which does not coverage to a Unique sum is called                 | A. Harmonic Series<br>B. Oscillatroy Series<br>C. Arithmetic Series<br>D. None of these                                       |
| 30 | A Geometric Series is divergent only if                                    | A. $ r  > 1$<br>B. $ r  \geq 1$<br>C. $ r  = 1$<br>D. None of these   |