

ECAT Mathematics Chapter 8 Sequences and Series Online Test

Sr	Questions	Answers Choice
1	The A.M. of two numbers is 34 and G.M. is 16, the numbers are	A. 2 and 64 B. 64 and 3 C. 64 and 4 D. None of these
2	If $a^x = b^y = c^z$ and a, b, c are in G.P. then x, y, z are in	A. A.P. B. G.P. C. H.P. D. None of these
3	If S_r denotes the sum of the first r terms of a G.P., then $S_n, S_{2n} - S_n, S_{3n} - S_{2n}$ are in	A. A.P. B. G.P. C. H.P. D. None of these
4	Given two numbers a and b . Let A denote the single A.M. between these and S denote the sum of n A.M.'s between them. Then S/A depends upon	A. n, a, b B. n, a C. n, b D. n
5	The third term of a G.P. is 4, The product of first five terms is	A. 43 B. 45 C. 46 D. None of these
6	5th term of a G.P. is 2, then the product of first 9 terms is	A. 256 B. 128 C. 512 D. None of these
7	An A.P. consists of n (odd terms) and its middle term is m . then the sum of the A.P. is	A. $2mn$ B. $\frac{1}{2}mn$ C. mn D. $mn^{>2</sup>}$
8	If a, b, c, d, e, f are in A.P., then $e - c$ is equal to	A. $2(c - a)$ B. $2(f - d)$ C. $2(d - c)$ D. $d - c$
9	If a, b, c are in A.P., then $3^a, 3^b, 3^c$ are in	A. A.P. B. G.P. C. H.P. D. None of these
10	The next term of the sequence 1, 2, 4, 7, 11, is.	A. 15 B. 16 C. 17 D. 18
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 B. r is an even integer C. p is an even integer D. s is an odd integer
12	$1 + 2 + 3 + \dots + n =$ _____	
13	The third term of the sequence $a_n = (-1)^{n-1}(n-7)$ is _____	A. 8 B. 4 C. -4 D. 8
14	The fifth term of the sequence $a_n = 2n + 3$ is _____	A. 13 B. -13 C. 8 D. 3
15	If $a_1 = 3, r = 2$, then the n th term of the G.P. is	A. $2.3^{>n-1</sup>}$ B. $3.2^{>n</sup>}$ C. $3.2^{>n+1</sup>}$ D. $3.2^{>n-1</sup>}$
16	If a_1, r and a_n are the first term, common ratio and the n th term respectively of a G. P. then $a_n =$	A. $a^{>1</sup>}r^{>n</sup>}$ B. $a^{>1</sup>}r^{>n-1</sup>}$ C. $a^{>1</sup>}r^{>n+1</sup>}$

		D. $a < 1$
17	Question Image	A. 2 B. $-\frac{3}{2}$ C. 1 D. 0
18	Question Image	A. 1, $\frac{1}{2}$, 0 B. 1, 2, 1 C. 1, 2, 3 D. 1, 2, 0
19	The 6th term of an arithmetic sequence whose first term is 3 and common difference in zero is	A. 18 B. 6 C. 3 D. 0
20	Question Image	
21	Question Image	
22	Question Image	
23	If A, G, H are the arithmetic, geometric and harmonic means between a and b respectively then A, G, H are in	A. A. P. B. G. P. C. H. P. D. None of these
24	$H_1, H_2, H_3, \dots, H_n$ are called n harmonic means between a and b if a, $H_1, H_2, H_3, \dots, H_n, b$ are in	A. H.P. B. G.P. C. A.P. D. None of these
25	A number H is said to be the H.M. between a and b if a, H, b are in	A. A.P. B. G. P. C. H. P. D. None of these
26	H.M. between 3 and 7 is	
27	The harmonic mean between a and b is	
28	Question Image	A. an A.P. B. a G.P. C. a H.P. D. None of these
29	No term of a harmonic sequence can be	A. 0 B. 1 C. 2 D. 3
30	A sequence of number whose reciprocals form an arithmetic sequence is called	A. Geometric sequence B. Arithmetic series C. Harmonic sequence D. Harmonic series