

## ECAT Mathematics Online Test

Sr	Questions	Answers Choice
1	$1/2, 1/3, 1/4, 1/5, \dots$ is	A. a geometric sec B. an arithmetic series C. finite sequence D. an infinite sequence
2	The 6th term of the sequence 7, 9, 12, 16, ... is	A. 27 B. 32 C. 20 D. 19
3	The element range of sequence are called	A. Series B. progression C. Members D. Terms
4	$1, 1/3, 1/5, 1/7, 1/9, \dots$ is a	A. geometric sequence B. finite sequence C. infinite sequence D. arithmetic series
5	If the domain of sequence is finite set then the sequence is called	A. geometric sequence B. infinite sequence C. finite sequence D. arithmetic sequence
6	A sequence having no last term is called	A. arithmetic sequence B. Geometric sequence C. Finite sequence D. Infinite sequence
7	If all members of a sequence are real numbers then it is called a	A. Series B. Function C. Real sequence D. Range
8	A sequence is a functions whose domain is a subset of the set of	A. Natural numbers B. Real numbers C. Whole numbers D. Rational numbers
9	Sequence also called.....	A. Series B. Function C. progressions D. Elements
10	An equation which hold good for all values of the variables is called	A. Identity B. fraction C. mixed form D. Partial equation
11	To express a single rational fraction as a sum of two or more single rational fractions which are called	A. improper fractions B. Partial fractions C. mixed form D. Polynomials
12	An improper rational fraction can be reduced by division to a	A. Proper fraction B. Polynomial C. mixed form
13	When rational fraction is separated into partial fractions, the result is	A. an identity B. A fraction C. A partial sum D. Improper fraction
14	Sum of all the four forth roots of unity is	A. 1 B. -1 C. i D. 0
15	Each complex cube root of unity is square of	A. itself B. 1 C. -1 D. the other

16	A polynomial $P(x)$ has a factor $(x-a)$ if $P(a) =$	A. $a$ B. $x$ C. $1$ D. $0$
17	If a polynomial $p(x)$ is divided by $x-c$ , then the remainder is	A. $p(x)$ B. $x-c$ C. $c$ D. $P(c)$
18	The synthetic division method is only used to divide a polynomial by	A. quadratic equation B. binomial C. linear equation D. monomial
19	If $x-2$ and $x-1$ both are factors of $x^3-3x^2+2x-4p$ , then $P$ must equal to	A. $1$ B. $2$ C. $0$ D. $-2$
20	Which of the following is factor of $x^{11}+a^{11}$ , where $n$ is an odd integer	A. $x-a$ B. $x+a$ C. $2x-a$ D. $2x+a$
21	If $3x^4 + 4x^3 + x^5$ is divided by $x+1$ , which of the following is the remainder	A. $7$ B. $-2$ C. $6$ D. $1$
22	$(x-1)$ is a factor of	A. $2x^3 - 3x^2 + 9$ B. $2x^3 - 5x - 8$ C. $48x^2 - 46x - 9$ D. $x^9 - 1$
23	Which of the following is factor of $p(x) = 2x^3 + 3x^2 + 3x + 2$ ?	A. $x+1$ B. $2x+1$ C. $3x+1$ D. $2x-1$
24	The maximum value of the quadratic function $f(x) = 2x^2 - 4x + 7$ , is	A. $3$ B. $5$ C. $-3$ D. $-5$
25	The maximum value of the quadratic function $f(x) = -2x^2 + 20x$ , is	A. $4$ B. $3$ C. $50$ D. $7$
26	The vertex of the graph of the quadratic function $f(x) = -x^2 + 6x + 1$ , is	A. $(-3, 10)$ B. $(-3, -10)$ C. $(3, 10)$ D. $(3, -10)$
27	The vertex of the graph of the quadratic function $f(x) = x^2 - 10$ , is	A. $(0, -10)$ B. $(-10, 0)$ C. $(10, 0)$ D. $(0, 10)$
28	The minimum value of the quadratic function $f(x) = 5x^2 - 11$ , is	A. $-11$ B. $6$ C. $-7$ D. $7$
29	The minimum value of the quadratic function $f(x) = x^2 + 6x - 2$ , is	A. $11$ B. $6$ C. $-11$ D. $13$
30	The standard form of the quadratic function $f(x) = -x^2 + 4x + 2$ , is	A. $(x-2)^2 + 6$ B. $-(x-2)^2 + 6$ C. $(x-3)^2 + 5$ D. $(x+4)^2 - 7$