

ECAT (Pre-Eng) Mathematics Chapter 17 Functions and Limits

Sr	Questions	Answers Choice
1	A function in which the variable appears as exponent is called:	A. An identity function B. A logarithmic function C. an exponential function D. A rational function
2	If $f(x) = \cos x$ then $f(0)$ is	A. 0 B. 1 C. 1/2
3	Question Image	
4	Question Image	A. 0 B. 1 C. -1 D. none of these
5	Question Image	
6	Question Image	
7	Question Image	A. quadratic function B. constant function C. linear function D. exponential function
8	The function discontinuous at $x = 0$ is (I) $\tan x$ (II) $\cot x$ (III) $\sec x$ (iv) $\operatorname{cosec} x$	A. I & III B. I & IV C. II & IV D. II & III
9	$f(x) = 3x^4 - 2x^2 + 7$ is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
10	Question Image	
11	If a tangent line touches the function $y = f(x)$ in more than one point then $y = f(x)$ is	A. Periodic B. Surjective C. Bijective D. Injective
12	Question Image	
13	If $f(a) = b^2$ and $g(c) = d$ where $c = b^2$ then $(g \circ f)(a)$ is	A. a B. c C. b D. d
14	Question Image	A. $f(x) = x^2$ B. $f(x^2) = x$ C. $f(x) = x$ D. none of these
15	$f(x) = ax + b$ will be an identity function if	A. $a = 1, b = 1$ B. $a = 1, b = 0$
16	Question Image	A. One-to-one and onto B. One-to-one but not on to C. Onto but not one-to-one D. Neither one-to-one nor onto
17	The range of $y = x^2 + 1$ is the set of non-negative real numbers except	A. $0 \leq y < 1$ B. $0 < y < 1$ C. $0 \leq y \leq 1$ D. $0 < y \leq 1$
18	The domain and range of a trigonometric function can be allocate by their	A. graph B. Continuity C. Discontinuity D. Periods
		A. 1/8 B. 1/4 C. 1/2 D. 3/4

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Question Image

- B. $\frac{1}{2}$
- C. $\frac{1}{4}$
- D. $\frac{1}{6}$

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Graph of the question $x^2 + y^2 = 4$ is

- A. A circle
- B. An ellipse
- C. A parabola
- D. A square