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

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | In common logarithm the base is | A. 1<br>B. 0<br>C. 10<br>D. e |
| 2 | Question Image | A. 0<br>B. 1<br>C. 2 |
| 3 | Question Image | A. f(x) = x<sup>2</sup><br>B. f(x<sup>2</sup>) = x<br>C. f(x) = x<br>D. none of these |
| 4 | If f (x) is defined and continuous then f (x) is always | A. Rational function<br>B. Trigonometric function<br>C. Logarithmic function<br>D. All are correct |
| 5 | Question Image | A. 1<br>B. 0<br>C. -2<br>D. 3 |
| 6 | $f(x) = 3x^4 - 2x^2 + 7$ is: | A. an even function<br>B. an odd function<br>C. an even and implicit function<br>D. neither even nor a odd |
| 7 | An even function is symmetric about the line | A. y = x<br>B. x = 0<br>C. y = -x<br>D. y = 0 |
| 8 | Question Image | A. 0<br>B. 1<br>C. 8<br>D. ∞ |
| 9 | A rule or correspondence that assigns to each element x in X a unique element y in Y is called a function from | A. X to X<br>B. X to Y<br>C. Y to X<br>D. none of these |
| 10 | Question Image | A. 0<br>B. 1<br>C. -1<br>D. none of these |
| 11 | If $f(x) = -x^2$ then f(-2) is | A. -2<br>B. 2<br>C. -4<br>D. 4 |
| 12 | If y=f(x) is a function then y is called | A. dependent variable<br>B. independent variable<br>C. constant<br>D. none of these |
| 13 | If f(x) = x + 1 then $f(z^2-1)$ is | A. z<sup>2</sup><br>B. z<sup>2</sup>+ 2<br>C. z<sup>2</sup>- 2<br>D. none of these |
| 14 | $\text{Sin } h^{-1}x$ = _____ | |
| 15 | The function f(x) =\|x\| is a/an_____function | A. Even<br>B. Odd<br>C. Both even as well as odd |

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|---|---|---|
| | | D. Neither even nor odd |
| 16 | The trigonometric function are continuous whenever | A. They are defined<br>B. their limit exist<br>C. Their period is given<br>D. All are incorrect |
| 17 | if $f(x) = x^3 - 3x^2 + 5x - 1$, then $f(-\sqrt{2})=$ | A. $7+7\sqrt{2}$<br>B. $3+3\sqrt{2}$<br>C. $-7-7\sqrt{2}$<br>D. $-3-3\sqrt{2}$ |
| 18 | The function f : x→ y defined as f (x) =α∀x∈ X,α∈ y is called | A. Constant function<br>B. Polynomial function<br>C. Identity function<br>D. Linear function |
| 19 | Question Image | |
| 20 | If $f(x) = x^3 - 2x^2 + 4x - 1$ then f(0) is | A. 0<br>B. 1<br>C. -1<br>D. none of these |