

## ECAT Mathematics Chapter 17 Functions and Limits

| Sr | Questions  | Answers Choice   |
|----|--|--|
| 1  | $\tan h x =$ _____   |  |
| 2  | $f(x) = x$ is  | A. trigonometric function<br>B. exponential function<br>C. quadratic function<br>D. identify function      |
| 3  | If $f(x) = x^2 - x$ then $f(1)$ is                                 | A. 0<br>B. 1<br>C. 2<br>D. 3   |
| 4  | Question Image   | A. 0<br>B. -4<br>D. none of these  |
| 5  | 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. $-3 - 3\sqrt{2}$                     |
| 6  | A function $F(x)$ is called even if                                | A. $F(x) = F(-x)$<br>B. $F(x) = F(-x)$<br>C. $F(x) = -F(x)$<br>D. $2F(x) = 0$                              |
| 7  | $\cos^2 x + \sin^2 x$  | A. an even function<br>B. an odd function<br>C. an even and implicit function<br>D. neither even nor a odd |
| 8  | The domain of $f(x) = \log x$ is                                   | A. $[0, \infty)$<br>B. $(0, \infty)$<br>C. $[0, \infty)$<br>D. $[-\infty, \infty)$                         |
| 9  | If $f(x) = \tan x$ then $f(0)$ is                                  | A. 0<br>B. 1<br>C. $1/2$   |
| 10 | Question Image   | A. $1/8$<br>B. $1/2$<br>C. $1/4$<br>D. $1/6$   |
| 11 | The largest possible domain of the function:<br>$y = \sqrt{x}$ is: | A. $(0, \infty)$<br>B. 12<br>C. $(3, 12)$<br>D. $(3, \infty)$  |

|    |   |   |
|----|---|---|
| 12 | Question Image                                    | <p>A. <math>\pi</math></p> <p>B. <math>2\pi</math></p> <p>C. <math>\frac{\pi}{2}</math></p> <p>D. None of these</p>         |
| 13 | $f(x) =  x $ is a/an                              | <p>A. Injective function</p> <p>B. Bijective function</p> <p>C. Surjective function</p> <p>D. Implicit function</p>         |
| 14 | If $f(x) = x^2$ then $f(0)$ is                    | <p>A. 0</p> <p>B. 1</p> <p>C. 2</p> <p>D. none of these</p>   |
| 15 | $\sin h x =$ _____                                |   |
| 16 | Question Image                                    | <p>A. -1</p> <p>B. 1</p> <p>C. 2</p> <p>D. -2</p>   |
| 17 | A function $f$ is said to be an even if $f(-x) =$ | <p>A. 0</p> <p>B. 1</p> <p>C. <math>f(x)</math></p> <p>D. <math>-f(x)</math></p>  |
| 18 | Question Image                                    | <p>A. <math>f(x) = x^2</math></p> <p>B. <math>f(x^2) = x</math></p> <p>C. <math>f(x) = x</math></p> <p>D. none of these</p> |
| 19 | Question Image                                    |   |
| 20 | Question Image                                    | <p>A. 0</p> <p>B. -2</p> <p>C. 1</p> <p>D. 4</p>  |