

ECAT Mathematics Chapter 18 Basic Concepts & Definitions

Sr	Questions	Answers Choice
1	If $f(x) = 2x^3 + 1$ then $f^{-1}(0) =$	A. 0 B. 1 C. 6 D. None of these
2	If $y = x^m$ then dy/dx equals:	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
3	The derivative of \sqrt{x} at $x = a$ is:	A. $1/2a$ B. $2/\sqrt{a}$ C. $2\sqrt{x}$ D. $1/2\sqrt{x}$
4	If c is a constant, then $d/dx(c) =$	A. 0 B. c C. cx D. 1
5	If $y = x^n$ then dy/dx equals:	A. nx B. x^{n-1} C. nx^{n-1} D. n
6	Question Image	
7	Question Image	
8	If $f(x) = x^{-100}$ the value of $f^{-1}(1)$ is:	A. 100 B. -100 C. 0 D. -101
9	Question Image	
10	$d/dx(\cos^2 x) =$	A. $-2x \cos x$ B. $-2x \sin^2 x$ C. $-2x \tan x$ D. $-2x \sec^2 x$
11	$d/dx(\cot x) =$	A. $\sec x \tan x$ B. $-\csc^2 x$ C. $\sec^2 x$ D. $1/\cot^2 x$
12	If $f(x) = c$ then $f^{-1}(x)$ equals:	A. 1 B. 0 C. cx D. c
13	Question Image	
14	Question Image	A. 1 B. 0 C. cx D. c
15	$d/dx(\cos x \sin x) =$	A. $\cos^2 x - \sin^2 x$ B. $2\cos^2 x + \sin^2 x$ C. $2\cos^2 x - \sin^2 x$ D. $1 - \sin^2 x$
16	if $x \in D_f$ and $f^{-1}(x)$ exists, then f is said to be	A. zero at x B. Differentiable at x C. Continuous at x D. None of these
17	Question Image	A. $2x$ B. $x/2$ C. $2x^3$

18 Question Image

19 Question Image

20 Question Image