ECAT Mathematics Chapter 18 Basic Concepts & Definitions

Sr	Questions	Answers Choice
1	The derivative of $\sqrt{x}$ at x =a is:	A. 1/2a B. 2 / √a C. 2√x D. 1 / 2√x
2	Question Image	A. 100 B. -100 C. 0 D. -101
3	Question Image	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
4	If y = 3 x + 2cos x, then dy/dx =	A. 3-2 sin x B. 3-t sin x C. 3x² - 2sin x D. 3(1-4 sin x)
5	d/dx (cos x sin x) =	A. cos² x - sin² x B. 2cos²x + sin² x C. 2cos² x - sin² x D. 1 - sin²x
6	If $f(x) = x^{2/3}$ then $f^{1}(x)$ at x = 8 equals:	A. 8 B. 1/8 C. 1/3 D. 2/3
7	Question Image	A. -2x B. x⁻³ D. -2x³
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	If c is a constant, then d/dx (c) =	A. 0 B. c C. cx D. 1
11	The derivative of $1/x^{m}$ is:	A. x^{m+1}/ m B. m(x)^{m-1} C. (m-1) x^{-m} D. m/x^{m+1}
12	d/dx (cos x^{2}) =	A. -2x cos x B. -2x sin x² C. -2x tan x D. -2x sec² x
13	Question Image	A. x²+ 2 B. 3x + 2 C. 3x²+ 5 D. 3x²+ 2
14	If $f(x) = 1/x-2$ then $f^{1}(0)$ equals:	A. -1/4 B. -3/2 C. -1/2 D. 1/5
15	Question Image	
16	Question Image	
		A. 1

17	If f(x) = c then $f^1(x)$ equals:	B. 0 C. cx D. c
18	Question Image	
19	Question Image	
20	$f(x) = ax^2-3x-5$, and $f^1(2) = 9$, a is equal to	A. 2 B. 3 C. -2 D. 4