ECAT Mathematics Chapter 18 Basic Concepts & Definitions

Sr	Questions	Answers Choice
1	Question Image	
2	Question Image	D. None of these
3	Question Image	
4	Question Image	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
5	If $x = 1 - t^2$ and $y = 3t^2 - 2t^3$ then dy/dx =	A. (1-t) B. 3(1+t) C. 3(t-1) D. 3/1-t
6	d/dx (cos x^2) =	A. -2x cos x B. -2x sin x² C. -2x tan x D. -2x sec² x
7	Differentiation of sin x w.r.t. cot x is:	A. -sin² x sec x B. -cos x sin² x C. -cos² x tan x D. -sin² x
8	Question Image	
9	If $x = at^2$ and $y = 2at$ then dy/dx =	A. 2a/y B. y/2a C. -a/2y D. -2y/a
10	If $3x + 4y + 7 = 0$, then dy / dx =	A. -1/2 B. -4/3 C. 7/2 D. -3/4
11	if $y=x^2$ then dy/dx equals:	A. 2x B. x/2 C. 2x³ D. x³/2
12	d/dx (cosec x)	A. -sec x tan x B. sin x cos x C. -csc x cot x D. 2sin x cos x
13	Question Image	
14	If $y = (7x + 9)^2$, then dy/dx equals:	A. 98x +126 B. 14x C. 14x +18 D. 14x+81
15	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}
16	If $f(x) = 2x^3 + 1$ then $f^1(0)$ =	A. 0 B. 1 C. 6 D. None of these
17	Question Image	
18	Question Image	
19	d/dx [$\tan^2 x$]	A. 2tan x sec² x B. 2tan x sec x C. 2 cot x tan x D. 2sec² x

		cos² x
20	Question Image	A. zero at x B. differentiable at x C. continuous at x D. none of these