ECAT Mathematics Chapter 18 Basic Concepts & Definitions

Sr	Questions	Answers Choice
1	If $3x + 4y + 7 = 0$, then $dy / dx =$	A. -1/2 B. -4/3 C. 7/2 D. -3/4
2	If $f(x) = c$ then $f^1(x)$ equals:	A. 1 B. 0 C. cx D. c
3	if $y=x^2$ then dy/dx equals:	A. 2x B. x/2 C. 2x³ D. x³/2
4	Question Image	A. 1 B. 0 C. cx D. c
5	If $y=x^m$ then dy/dx equals:	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
6	If $y = (7x + 9)^2$, then dy/dx equals:	A. 98x +126 B. 14x C. 14x +18 D. 14x+81
7	Question Image	A. 8 B. 1/8 C. 1/3 D. 2/3
8	Question Image	A. 0 B. 8 C. 5 D. 9
9	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
10	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
11	Question Image	
12	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
13	Question Image	A. x²+ 2 B. 3x + 2 C. 3x²+ 5 D. 3x²+ 2
14	Question Image	B. xⁿ⁻¹
15	Question Image	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
16	$f(x) = ax^2-3x -5$, and $f^1 (2) = 9$, a is equal to	A. 2 B. 3 C. -2 D. 4

17	If $f(x) = x^{-100}$ the value of $f^{1}(1)$ is:	A. 100 B. -100 C. 0 D. -101
18	Question Image	
19	Question Image	
20	If $y = x^{n}$ then dy/dx equals:	A. nx B. xⁿ⁻¹ C. nxⁿ⁻¹ D. n