ECAT Mathematics Chapter 18 Basic Concepts & Definitions Online Test

Sr	Questions	Answers Choice
1	If $y = 1/x^2$ then dy/dx equals:	A. -2x B. x⁻³ C. -2/x³ D. -2x³
2	Question Image	
3	If $y = (7x + 9)^2$, then dy/dx equals:	A. 98x +126 B. 14x C. 14x +18 D. 14x+81
4	Question Image	
5	Question Image	
6	d/dx (cosec x)	A. -sec x tan x B. sin x cos x C. -csc x cot x D. 2sin x cos x
7	If $f(x) = 2x^3 + 1$ then $f^1(0)$ =	A. 0 B. 1 C. 6 D. None of these
8	Question Image	D. None of these
9	d/dx (cos x^2) =	A. -2x cos x B. -2x sin x² C. -2x tan x D. -2x sec² x
10	If $f(x) = c$ then f^1 (x0 equals:	A. 1 B. 0 C. cx D. c
11	Question Image	
12	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
13	Let f be real valued function continuous in the interval $(x,x_1) \subseteq D_f$ (the domain of f), then $f(x_1) - f(x)/x_1$-x represents:	A. Instantaneous rate B. Average rate of change C. Differential coefficient D. None of these
14	If $y=x^m$ then dy/dx equals:	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
15	Question Image	A. 1 B. 0 C. cx D. c
16	Question Image	A. 2x B. x/2 C. 2x³ D. x³/2
17	Question Image	A. 8 B. 1/8 C. 1/3 D. 2/3
18	Question Image	A. zero at x B. differentiable at x C. continuous at x

		D. none of these
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	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}