ECAT Pre General Science Mathematics Chapter 19 Integration Online Test

Sr	Questions	Answers Choice
1	The solution of differential equation:	A. dy/dx+y/x = x²is : B. 4xy = x⁴+ c C. 4x = x⁴= c D. 4 y = x⁴+ c E. 4x=4x³ + c
2	An equation in which at least one term contains dy/dx, d^2 y /dx^2etc, is called.	A. Differential equation B. Initial condition C. General solution D. Singular equation
3	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
4	The area enclosed between the graph y = x^2 -4x and the x- axis is:	A. 20/3 B. 41/3 C. 32/3 D. 25/3
5	The area under the curve y = 1/x^2 between x = 1 and x =4 is:	A. -25 B. 0.75 C. -0.35 D. -10
6	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
7	The area between the x-axis and the curve y = x^2 + 1 from x = 1 to 2 is:	A. 15/6 B. 15/4 C. 10/4 D. 10/3
8	∫x/Sin^2 x dx is equal to:	A. x cot x + ln|sin∫x| B. -x cot x - ln|sin∫x| C. x cot x - ln|sin∫x| D. x. tan x- ln|sec∫x|
9	∫x sin xdx is equal to:	A. sin x/x + cos x B. sin x - cos x/x C. x cos x + sin x D. - x cos x + sin x
10	∫ x cos dx is equal to :	A. x cos x + sin x B. cos x + x sin x C. x cos x + x sin x D. x sin x + cos x
11	∫sin(ax+b) dx is equal to:	A. 1/2a cos (ax + b) B. -1/a cos (ax +b) C. 1/a cos (ax +b) D. 1/a ln (ax + b)
12	∫Sec^2 (ax + b) dx is equal to:	A. tan² (ax + b) B. 1/a tan² (ax + b) C. 1/atan (ax +b) D. tan (ax + b)
13	The integral of 3x^5dx is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
14	∫*f*(x) is known as:	A. Definite itegral B. Indefinite integral C. Fixed integral D. Multiple integral
15	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx

		D. Inx
16	Which of the following integrals can be evaluated	
17	Question Image	
18	Question Image	A. π B. π/6 C. -π/2 D. 2π
19	Question Image	A. 0 B. 1 C. 2 D. 4
20	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
21	If the graph of f is entirely below the x-axis, then the value of definite integral is	A. = 0 B. < 0 C. > 0 D. None
22	If the lower limit of an integral is a constant and the upper limit is a variable, then the integral is a	A. Constant function B. Variable value C. Function of upper limit D. All
23	The arbitrary constants involving in the solution can be determined by the given conditions. Such conditions are called	A. Boundaries B. Variable separable C. Initial values D. None
24	Question Image	A. Y = -x log x -x + c B. Y = x log x + x C. Y = x log x - x + c D. None of these
25	Question Image	
26	Question Image	
27	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
28	Question Image	A. A variable B. A constant C. 0 D. None of these

29	Question Image
30	Question Image