ECAT Mathematics Chapter 19 Integration Online Test

Sr	Questions	Answers Choice
1	Question Image	
2	Question Image	
3	The differential equations of all conis whose axes coincide with the co-ordinate axis is	
4	Question Image	A. 2, 3 B. 3, 3 C. 2, 6 D. 2, 4
5	Question Image	B. ln(x²- x + 1) + c D. ln(2x - 1) + c
6	Question Image	
7	Question Image	
8	Question Image	A. a tan(ax + b) + c B. - a tan(ax + b) + c
9	Question Image	
10	Which of the following integrals can be evaluated	
11	Question Image	
12	f(x)g(x)- ∫g(x) f′(x) dx is equal to	A. ∫f(x)g′(x)dx B. ∫f′(x)g(x)dx C. ∫f′(x)g(x)′dx D. ∫f(x)g(x)dx
13	Question Image	
14	Question Image	A. - cot 4x + c B. cot 4x + c C. tan 4x + c D. - tan 4x + c
15	Question Image	A. A variable B. A constant C. 0 D. None of these
16	Question Image	A. cos 2x + c B. - cos 2x + c C. tan 2x + c D. cot 2x + c
17	Question Image	
18	The function ø(x) is ananti derivativeof function f (x),x∈Df if	A. ø′(x) =∫f(x)dx B. ø(x) =∫f(x)dx C. ø′(x) =f(x) D. ø(x) =∫′(x)dx
19	Question Image	
20	Question Image	
21	Question Image	
22	Question Image	
23	Question Image	
24	Question Image	
25	Question Image	
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27	Question Image	
28	Question Image	
29	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
30	Question Image	
31	Question Image	
32	Question Image	A. y + 1 = Ae^x B. y + 1 = Axe^x C. xe^x= C D. y + xe^x= C
33	Question Image	
34	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
35	Question Image	
36	Question Image	
37	Question Image	
38	Question Image	A. 2x + 3 B. x²+ 3 + c
39	The integral of $3x^5dx$ is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
40	Archimedes approximate the function by horizontal function and the area under f by the sum of small	A. Parallelograms B. Squares C. Retangles D. Polygons
41	Question Image	A. 1 B. 2 C. 3 D. 4
42	Question Image	
43	Question Image	A. sec 3x + c B. - cosec 3x + c
44	Question Image	A. cot x + c B. tan x + c C. -cot x + c D. -tan x + c
45	Question Image	A. 0 B. 1 C. 2 D. 4
46	Question Image	B. 6x + 2 + c C. 6x + x²+ c D. 6x³+ x²+ x
47	Question Image	B. a^xln a + c C. a^x+ c D. x a^x+ c
48	Question Image	
49	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx D. lnx
50	The set of all antiderivaties of f(= $\int f(x)dx$) is the	A. Definite integral B. Indefinite integral C. Integral D. Area

51	Question Image	
52	Question Image	
53	∫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)
54	Question Image	
55	∫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)
56	Te order of the differential equation of all conics whose axes coincide with the axes of co-ordinates is	A. 2 B. 3 C. 4 D. 1
57	Question Image	A. cos 3x + c B. - cos 3x + c
58	Question Image	A. 4(x³- 3x²)³+ c B. 3x²- 6x + c
59	Question Image	C. x²+ 2x + c D. (x²+ 2x -1) ⁴+ c
60	Question Image	A. sec 5x + c B. - sec 5x + c
61	Question Image	
62	Which of the following integrals can be evaluated	
63	Question Image	B. ln(x²- x + 1) ⁴+ c
64	Question Image	C. ln f(x) + c D. f(x) - c
65	Question Image	
66	Question Image	
67	Question Image	
68	Question Image	
69	Question Image	
70	Question Image	
71	Question Image	
72	∫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
73	The approximate percentage increase in the volume of a cube if the length of its each edge changes from 5 to 5.02 is	A. 1.2% B. 1.5% C. 0.16% D. 100.16%
74	Question Image	
75	Question Image	
76	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
77	∫x/Sin^2 x dx is equal to:	A. x cot x + ln|sinx | B. -x cot x - ln|sinx | C. x cot x - ln|sinx | D. x. tan x- ln|secx |
78	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c

		D. sec x + c
79	The number of arbitrary constants in the general solution of a differential equation is equal to the different equation	A. Order B. Degree C. Variables D. All are correct
80	The area bounded by y = x (x2 - 4) and below x - axis is	A. 4 B. 0 C. -4 D. 8
81	Question Image	A. 1 B. 2 C. 3 D. 4
82	Question Image	B. a f(x) + c C. f(x) + a
83	Question Image	A. a cos(ax + b) + c B. - a cos(ax + b) + c
84	Question Image	A. 5x^{4 + c} B. 1/6 x⁶+ c C. 5x²+ c D. 1/5 x⁶+ c
85	The process of finding a function whose derivative is given is called a	A. Differentiation B. Integration C. Differential D. None
86	∛8.6 is approximately equal to	A. 2.488 B. 2.48 C. 2.0488 D. 2.05
87	Question Image	A. e^x+ c B. e^{-x}+ c C. x e^x+ c D. not possible
88	The approximate increase in the area of a circular disc if its diameter increased form 44cm to 44.4cm is	A. 0.4cm B. 8.8πcm C. 17.6 πcm D. 35.2πcm
89	Question Image	A. cos x + c B. -sin x + c C. -cos x + c D. sin x + c
90	Question Image	B. x⁻²+ c D. not possible
91	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
92	Question Image	A. (x³- 3x²)⁸+ c D. 3x²- 6x + c
93	Question Image	A. x³- x²+ x + c B. 6x - 2 + c C. x³- 2x + c
94	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
95	The differential equation of all st. lines which are at a constant distance to form the origin is	
96	Question Image	
97	Question Image	
98	Question Image	
99	Question Image	
		A. Definite itegral B. Indefinite integral

100	∫f(x) is known as:	C. Fixed integral D. Multiple integral
101	Question Image	
102	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
103	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
104	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
105	Question Image	
106	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
107	Question Image	A. a sin(ax + b) + c B. - a sin(ax + b) + c
108	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
109	Question Image	
110	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
111	Question Image	A. a sec(ax + b) + c B. - a sec(ax + b) + c
112	Question Image	A. 6x - 2 + c B. x³- x²+ x + c C. 6x - x²+ c D. 6x³- x²+ c
113	Question Image	
114	Question Image	
115	Question Image	
116	Question Image	A. 1 + tan²x + c B. tan x + c C. -tan x + c D. cot x + c
117	Question Image	B. sin 2x + c C. -sin 2x + c
		A. π B. <span style="color: rgb(34, 34

118	Question Image	B. π/6 C. -π/2 D. 2π
119	Question Image	A. a cot(ax + b) + c B. - a cot(ax + b) + c
120	∫ 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
121	Question Image	
122	Question Image	A. sin x + c B. -sin x + c C. cos x + c D. -cos x + c
123	Question Image	A. 2x - 3x + c C. x²- 3x + c
124	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
125	Question Image	D. none of these
126	Question Image	
127	Question Image	
128	Question Image	A. a cosec(ax + b) + c B. - a cosec(ax + b) + c
129	The differential equation representing the family of curves y = A cos (x + B), where A, B are parameters, is	
130	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
131	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
132	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
133	Question Image	