

INTEGRALS**DEFINITE INTEGRAL****EXERCISE**

Q.1 In $\int_a^b f(y)dy$, what is 'a' called as?

(a) Integration

(b) Upper limit

(c) Lower limit

(d) Limit of an integral

Q.2 The value of $\int_0^\pi \sin y dy$ is 2.

(a) True

(b) False

Q.3 Compute $\int \cos(x) - \frac{3}{x^4} dx$.

(a) $\sin(x) + \frac{3}{4}x^{-7} + c$

(b) $\sec(x) + \frac{3}{4}x^{-3} + c$

(c) $\sin(x) + \frac{3}{4}x^{-3}$

(d) $\sin(x) + \frac{3}{4}x^{-3} + c$

Q.4 What is the value of $\int_2^3 \cos(x) - \frac{3}{x^4} dx$

(a) $\sin(3) - \sin(2)$

(b) $\sin(3) - \sin(9) - \frac{19}{288}$

(c) $\sin(8) - \sin(2) - \frac{19}{288}$

(d) $\sin(3) - \sin(2) - \frac{19}{288}$

Q.5 Evaluate $\int_7^9 \cos(x) dx$

(a) $8 (-\sin 9 - \sin 7)$

(b) $8 (\sin 9 + \sin 7)$

(c) $8 (\sin 9 - \sin 7)$

(d) $7 (\sin 9 - \sin 7)$

Q.6 Compute $\int_2^3 \frac{\cos x - \sin x}{4} dx$.

(a) $\frac{1}{4} (\sin 2 + \cos 3 - \sin 3 - \cos 2)$

(b) $\frac{1}{4} (\sin 3 - \cos 3 - \sin 2 - \cos 2)$

(c) $\frac{1}{4} (\sin 3 + \cos 3 - \sin 2 - \cos 2)$

(d) $\frac{1}{4} (\sin 3 + \cos 3 + \sin 2 - \cos 2)$

Q.7 What is y in $\int_a^b f(y) dy$ called as?

(a) Random variable

(b) Dummy symbol

(c) Integral

(d) Integrand

Q.8 The value of $\int_1^2 1y^5 dy$ is

(a) 10.5

(b) 56

(c) 9

(d) 23

Q.9 The value of $\int_1^2 1y^5 / 5 dy$ is

(a) 12

(b) 2.1

(c) 21

(d) 11.1

Q.10 Evaluate $\int_0^\pi \sin x dx$.

(a) 2

(b) 6

(c) 17

(d) 3

Q.11 Evaluate $\int_2^3 \cos x dx$.

(a) 38.2

(b) $\sin(9) - \sin(4)$

(c) 89.21

(d) $\sin(3) - \sin(2)$

Q.12 Compute $\int_2^3 2e^x dx$.

(a) $2(e^9 - e^4)$

(b) 84.32

(c) $2(e^3 - e^2)$

(d) 83.25

Q.13 $\ln \int_b^a f(x) dx$, b called as lower limit and a is called as upper limit.

(a) False

(b) True

Q.14 Compute $\int_0^6 9e^x dx$

(a) 30.82

(b) $9(e^6 - e^3)$

(c) 11.23

(d) $81(e^6 - e^3)$

Q.15 Evaluate $\int_3^7 \sin(t) - 2\cos(t) dt$.

(a) $\cos(7) - 2\sin(7) + (\cos(3) + 2\sin(3))$

(b) -17

(c) 12

(d) $\cos(7) - 2\sin(7) - (\cos(3) + 2\sin(3))$

ANSWER KEY

1. (b)
2. (a)
3. (d)
4. (d)
5. (c)
6. (c)
7. (b)
8. (a)
9. (b)
10. (a)
11. d
12. c
13. b
14. b
15. d