



DPP - 7 (Basic Maths)

Video Solution on Website:-

https://physicsaholics.com/home/courseDetails/36

Video Solution on YouTube:-

https://youtu.be/7smFzaTLc9E

Written Solution on Website:-

https://physicsaholics.com/note/notesDetalis/70

Q 1. Find
$$\int x \, dx = ?$$

(a) $\frac{x^2}{2} + C$

(a)
$$\frac{x^2}{2} + C$$

(b)
$$x^2 + C$$

(c)
$$x^2 + x + C$$

Q 2. Find
$$\int \frac{1}{x} dx = ?$$

(a) $\frac{x^2}{2} + C$
(c) $\ln x + C$

(a)
$$\frac{x^2}{2} + C$$

(b)
$$\frac{1}{x^2} + C$$

(c)
$$\ln x + C$$

Q 3. Find
$$\int (4x^2 + 1) dx = ?$$

(a)
$$x^4 + x + C$$

(b)
$$\frac{4x^3}{x^3} + x + C$$

(c)
$$8x + C$$

(d) None of these

Q 4. Find
$$\int 3e^{3x} dx = ?$$

(a)
$$3e^{3x} + C$$

(b)
$$e^{3x} + 6$$

(c)
$$\frac{3e^{4x}}{4} + C$$

(d) None of these

Q 5. Find
$$\int \left(e^x + \frac{2}{x}\right) dx = ?$$

(a)
$$e^{2x} + \ln 2x + C$$

(b)
$$\frac{e^{2x}}{2}$$
 + 2 ln 2x + C

(c)
$$e^x + 2 \ln x + C$$

(d) None of these

Q 6. If
$$y = (3x + 1)^3$$
, then find $I = \int y \, dx$?

(a)
$$I = \frac{(3x+1)^4}{4} + C$$

(c) $I = \frac{(3x+1)^4}{3} + C$

(b)
$$\frac{(3x+1)^4}{12} + C$$

(c)
$$I = \frac{(3x+1)^4}{3} + 6$$

(d) None of these

Q 7. If
$$y = \sin x + \cos x$$
, then find $I = \int y \, dx$?

(a)
$$I = -\cos x - \sin x + c$$

(b)
$$I = \cos x - \sin x + c$$

(c)
$$I = -\cos x + \sin x + c$$

(d) None of these



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Q 8. Find
$$I = \int \frac{1}{x^3} dx$$
?

Find
$$I = \int \frac{1}{x^3} dx$$
?
(a) $I = -\frac{1}{2x^2} + c$
(c) $I = \frac{1}{x^2} + c$

(b)
$$I = \frac{1}{2x^2} + c$$

(c)
$$I = \frac{1}{r^2} + c$$

(d) None of these

Q 9. Find
$$I = \int (e^x + \cos x) dx$$
?
(a) $I = e^x - \sin x + c$

(a)
$$I = e^x - \sin x + a$$

(b)
$$I = e^x + \sin x + c$$

(c)
$$I = e^x - \cos x + c$$

(d) None of these

Q 10. Find
$$I = \int (4x^3 + 3x^2 + 2x + 1) dx$$
?

(a)
$$I = 12x^4 + 6x^3 + 2x^2 + x + c$$

(b)
$$I = \frac{4}{3}x^4 + \frac{3}{2}x^3 + 2x^2 + x + c$$

(c) $I = x^4 + x^3 + x^2 + x + c$

(c)
$$I = x^4 + x^3 + x^2 + x + c$$

(d) None of these

Q 11. Find
$$I = \int (6\sqrt[5]{x} + 5\sqrt[3]{x^2}) dx$$
?

(a)
$$I = 5x^{\frac{6}{5}} + 3x^{\frac{5}{3}} + e$$

(b)
$$I = x^{\frac{6}{5}} + x^{\frac{5}{2}} + c$$

(c)
$$I = 6x^{\frac{6}{5}} + 5x^{\frac{5}{2}} + c$$

(d) None of these

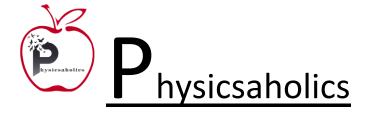
Q 12. Find
$$I = \int (3x^2 + e^x + \sin x + 2) dx$$
?

(a)
$$I = 3x^3 + e^x + \cos x + 2x + c$$

(b)
$$I = x^3 + e^x - \cos x + 2x + c$$

(c)
$$I = x^3 + e^x + \cos x + 2x + c$$

(d) None of these





Answer Key

Q.1	a	Q.2	c	Q.3	b	Q.4	b	Q.5	c
Q.6	b	Q.7	c	Q.8	a	Q.9	b	Q.10	c
Q.11	a	Q.12	b						