RAVI MATHS TUITION CENTER, CHENNAI-82. WHATSAPP - 8056206308

Integrals

12th Standard

Maths

12 x 2 = 24

1) Evaluate the integral: $\int \frac{x^2+4x}{x^3+6x^2+5}dx$

2) Evaluate the integral: $\int \frac{(1+log\, x)^2}{x}dx$

3) Evaluate the integral: $\int \frac{e^{2x}-e^{-2x}}{e^{2x}+e^{-2x}}dx$

4) Evaluate the integral: $(\int \sqrt{x}+\frac{1}{\sqrt{x}})^2 dx.$

5) $\int \sqrt{tan\, x}(1+tan^2\, x)\ dx.$

6) Evaluate the integral: $\int \frac{1}{cos^2\, x(1-tan\, x)^2}dx.$

7) Given $\int e^x(tanx+1)secxdx = e^x f(x)+c$. Write f(x) satisfying the above.

8) $\int \frac{cosx}{cos(x+\alpha)}dx$

9) $\int e^x(sinx+cosx)dx$

10) $\int e^x\,[cotx+logsinx]\,dx$

11) Evaluate : $\int_0^1 xe^x dx$

12) Evaluate $\int \left(1-\frac{1}{x^2}\right)\cdot e^{x+\frac{1}{x}}dx$

12 x 3 = 36

13) Find: $\int \frac{1}{(x+1)(x+2)}dx$

14) Evaluate: $\int_{-1}^{2}|x^3-x|dx.$

15) Find the integral: $\int \left(\frac{x^3+x^2+x-1}{x-1}\right)dx$

16) Integrate $\frac{\sqrt{\tan x}}{\sin x\cos x}$

17) Integrate $\frac{(x+1)(x+\log x)^2}{x}$

18) Integrate the rational functions in $\frac{3x-1}{(x-1)(x-2)(x-3)}$

19) Integrate the functions in $e^x\left(\frac{1+\sin x}{1+\cos x}\right)$

20) Evaluate the integral: $\int \frac{3x+5}{\sqrt{x^2-8x+7}}dx$

21) Evaluate the integral: $\int_0^1\ x^2(1-x)^n\ dx$

22) Evaluate $\int_1^4\{|x-1|+|x-2|+|x-4|\}dx$

23) Evaluate $\int_0^{\pi/4}\log(1+\tan x)dx$

24) Evaluate $\int e^x\cos x dx$

4 x 5 = 20

25) Find : $\int \frac{x^2+x+1}{(x+1)^2(x+2)}dx$

26) Evaluate : $\int \frac{8}{(x+2)(x^2+4)}dx$

27) Evaluate : $\int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \frac{dx}{1+\sqrt{\cot x}}$

28) Evaluate the following integral.
$\int_0^{\pi/2}[2\log(\sin x)-\log(\sin 2x)]dx$

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