

## UNIT-VII

### INTEGRATION

1. Find :  $\int (4x^2 + 3x^2 + 2x + 4)dx$
2. Evaluate :  $\int 10^{x+7} dx$
3. Evaluate :  $\int \frac{x^3 + 6x^2 + 5x + 4}{x^2} dx$
4. Find :  $\int (ax^3 + bx^2 + cx + d)dx$
5. Find :  $\int (2x+5)^3 dx$
6. Find  $\int (1+3^x + x^3)dx$
7. Evaluate :  $\int \frac{x^5 + 6x^2 + 7}{\sqrt{x}} dx$
8. Find :  $\int \frac{x+1}{x-1} dx$
9. Find the value of :  $\int a^x dx$
10. Find the value of :  $\int \frac{x^2 + 1}{x-1} dx$
11. Find the value of :  $\int e^{5x+7} dx$
12. Evaluate :  $\int \frac{4x-6}{x^2 - 3x + 7} dx$
13. Evaluate  $\int \frac{e^x + e^{-x}}{e^x - e^{-x}} dx$
14. Evaluate  $\int \frac{1}{x} \cdot \log x dx$
15. Evaluate  $\int x^4 \cdot e^{x^5} dx$
16. Integrate with respect to  $x : \frac{2ax + b}{(ax^2 + bx - c)^5}$
17. Integrate :  $\int \frac{dx}{25 - x^2}$

18 Evaluate :  $\int \frac{e^{3x} + e^{4x}}{e^x} dx$

19 Integrate :  $\int x\sqrt{x-1}dx$

20 Integrate :  $\int \log x.dx$

21 Integrate :  $\int x^2 e^{3x} dx$

22 Evaluate :  $\int \frac{e^x(x-1)}{x^2} dx$

23 Integrate :  $\int \frac{(x+1)}{(x+2)^2} e^x dx$

24 Find y if  $\frac{dy}{dx} = 5x^2 + 2$

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

26 Integrate :  $\int \frac{dx}{(x+1)(x+2)}$

27 Integrate :  $\int \frac{xdx}{(x-1)(x-2)}$

28 Integrate :  $\int \frac{dx}{x(1+x^4)}$

29 Evaluate  $\int 3x^2 (x^3 + 5)^5 dx$

30 Integrate :  $\int \frac{2x}{1+x^2} dx$

