55.(a)	56.(b)	57.(a)	58.(c)	59.(a)	60.(b)	61.(b)	62.(b)	63.(c)	
64.(a)	65.(c)	66.(b)	67.(c)	68.(a)	69.(c)	70.(a)	71.(c)	72.(b)	73.(b)
74.(a)	75.(c)	76.(b)	77.(b)	78.(c)	79.(c)	80.(a)	81. (b)	82.(c)	83.(a)
84.(c)	85.(d)	86.(b)	87.(c)	88.(d)	89.(a)	90.(c)	91. (a)	92.(b)	93.(c)
94.(b)	95.(b)	96.(b)	97.(c)	98.(a)	99.(b)	100.(c)	101. (d)		

INDEFINITE INTEGRALS-III

1. $\int xe^x dx = ?$

(a) $e^x (1 - x) + C$ (b) $e^x (x + 1) + C$ (c) $e^x (x - 1) + C$ (d) none of these

2. $\int xe^{2x} dx = ?$

(a) $\frac{1}{2}xe^{2x} + \frac{1}{4}e^{2x} + C$ (b) $\frac{1}{2}xe^{2x} - \frac{1}{4}e^{2x} + C$

(b) $2xe^{2x} + 4e^{2x} + C$ (d) none of these

3. $\int x\cos 2x dx = ?$

(a) $\frac{1}{2}x\sin 2x + \frac{1}{4}\cos 2x + C$ (b) $\frac{1}{2}x\sin 2x - \frac{1}{4}\cos 2x + C$

(c) $2x\sin 2x + 4\cos 2x + C$ (d) none of these

4. $\int x\sec^2 x dx = ?$

(a) $x \tan x - \log|\cos x| + C$ (b) $x \tan x + \log|\cos x| + C$

(c) $x \tan x - \log|\sec x| + C$ (d) none of these

5. $\int x\sin 2x dx = ?$

(a) $\frac{1}{2}x\cos 2x + \frac{1}{4}\sin 2x + C$ (b) $-\frac{1}{2}x\cos 2x - \frac{1}{4}\sin 2x + C$

(c) $-\frac{1}{2}x\cos 2x + \frac{1}{4}\sin 2x + C$ (d) none of these

6. $\int x\log x dx = ?$

(a) $x\log x+\frac{1}{2}x^2+C$ (b) $\frac{1}{2}x^2\log x+\frac{1}{4}x^2+C$

(c) $\frac{1}{2}x^2\log x-\frac{1}{4}x^2+C$ (d) none of these

7. $\int x\cos ec^2 x dx=?$

(a) $x\cot x-\log[\sin x[+C$ (b) $-x\cot x+\log x+\frac{1}{4}x^2+C$

(c) $\frac{1}{2}x^2\log x-\frac{1}{4}x^2+C$ (d) none of these

8. $\int x\sin x\cos x dx=?$

(a) $-\frac{1}{4}x\sin 2x+\frac{1}{8}\cos 2x+C$ (b) $\frac{1}{4}x\cos 2x-\frac{1}{8}\sin 2x+C$

(c) $\frac{1}{2}x\sin 2x+\frac{1}{4}\cos 2x+C$ (d) $-\frac{1}{4}x\cos 2x+\frac{1}{8}\sin 2x+C$

9. $\int x\cos^2 x dx=?$

(a) $\frac{x^2}{4}-\frac{x\sin 2x}{4}+\frac{\cos 2x}{8}+C$ (b) $\frac{x^2}{4}+\frac{x\sin 2x}{4}+\frac{\cos 2x}{8}+C$

(c) $\frac{x^2}{4}+\frac{x\sin 2x}{4}-\frac{\cos 2x}{8}+C$ (d) none of these

10. $\int\frac{\log x}{x^2}dx=?$

(a) $-\frac{1}{x}(\log x+1)+C$ (b) $\frac{1}{x}(\log x-1)+C$

(c) $\frac{1}{x}(\log x+1)+C$ (d) none of these

11. $\int\log x dx=?$

(a) $\frac{1}{x}+C$ (b) $\frac{1}{2}(\log x)^2+C$ (c) x(log x + 1) +C (d) x(log x – 1)+C

12. $\int \log_{10} x dx = ?$

(a) $\frac{1}{x}\log_e 10 + C$ (b) $\frac{1}{x}\log_{10^e} + C$

(c) x(log x – 1)$\log_e$ 10 + C (d) x(log x – 1) $\log_{10^e}$ + C

13. $\int (\log x)^2 dx = ?$

(a) $\frac{2\log x}{x}$ (b) $\frac{1}{3}(\log x)^3 + C$

(c) $x(\log x)^2$-2x log x + 2x +C (d) $x(\log x)^2$ +2xlog x -2x + C

14. $\int e^{\sqrt{x}} dx = ?$

(a) $e^{\sqrt{x}} + \sqrt{x} + C$ (b) $\frac{1}{2}e^{\sqrt{x}}(\sqrt{x}+1) + C$ (c) $2e^{\sqrt{x}}(x-1) + C$ (d) none of these

15. $\int \cos\sqrt{x} dx = ?$

(a) $\sin\sqrt{x} + \cos\sqrt{x} + C$ (b) $\frac{1}{2}(\sqrt{x}\sin\sqrt{x} - \cos\sqrt{x}) + C$

(c) $2\left[\sqrt{x}\sin\sqrt{x} + \cos\sqrt{x}\right] + C$ (d) none of these

16. $\int \cos(\log x) dx = ?$

(a) $\frac{x}{2}[\cos(\log x) - \sin(\log x)] + C$ (b) $\frac{x}{2}[\cos(\log x) + \sin(\log x)] + C$

(c) $2x[\cos(\log x) + \sin(\log x)] + C$ (d)$2x[\cos(\log x) - \sin(\log x)] + C$

17. $\int \sec^3 x dx = ?$

(a) $\frac{1}{2}$ [sec x tan x – log $|\sec x + \tan x|$] + C

(b) $\frac{1}{2}[\sec x \tan x + \log|\sec x + \tan x|] + C$

(c) $2[\sec x \tan x + \log|\sec x + \tan x|] + C$ (d) none of these

18. $\int \left\{\frac{1}{(\log x)} - \frac{1}{(\log x)^2}\right\} dx = ?$

(a) x log x + C (b) $\frac{x}{\log x}+C$ (c) x + $\frac{1}{\log x}+C$ (d) none of these

19. $\int 2x^3 e^{x^2} dx = ?$

(a) $e^{x^2}(x^2-1)+C$ (b) $e^{x^2}(x^2+1)+C$ (c) $e^{x^2}(x+1)+C$ (d) none of these

20. $\int (x2^x)dx = ?$

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

(c) $\frac{x.2^x}{(\log 2)}(x+\log 2)+C$ (d) none of these

21. $\int x\cot^2 x dx = ?$

(a) $-\cot x+\frac{x^2}{2}+\log|\sin x|+C$ (b) $-x\cot x-\frac{x^2}{2}+\log|\sin x|+C$

(c) $-x\cot x+\frac{x^2}{2}-\log|\sin x|+C$ (d) none of these

22. $\int \sin\sqrt{x}dx = ?$

(a) $-\sqrt{x}\cos\sqrt{x}+C$ (-b) - $\sqrt{x}\cos\sqrt{x}-2\sin\sqrt{x}+C$

(c) $-2\sqrt{x}\cos\sqrt{x}+2\sin\sqrt{x}+C$ (d) none of these

23. $\int e^{\sin x}\sin 2x dx = ?$

(a) (2sin x)$e^{\sin x}$ + C (b) (2cos x)$e^{\sin x}$ +C (c) 2$e^{\sin x}$ (sin x + 1) +C
(d) 2$e^{\sin x}$ (sin x – 1) +C

24. $\int \frac{\sin^{-1}x}{(1-x^2)^{3/2}}dx = ?$

(a) $\frac{\sin^{-1}x}{\sqrt{1-x^2}}-\frac{1}{2}\log|1-x^2|+C$ (b) $x\sin^{-1}x+\frac{1}{2}\log|1-x^2|+C$

(c) $\frac{x\sin^{-1}x}{\sqrt{1-x^2}}+\frac{1}{2}\log|1-x^2|+C$ (d) none of these

25. $\int \frac{x\tan^{-1}x}{(1-x^2)^{3/2}}dx = ?$

(a) $\frac{\tan^{-1}x}{\sqrt{1+x^2}} - \frac{x}{\sqrt{1+x^2}} + C$ (b) $\frac{-\tan^{-1}x}{\sqrt{1+x^2}} + \frac{x}{\sqrt{1+x^2}} + C$

(c) $\frac{x\tan^{-1}x}{\sqrt{1+x^2}} + \frac{1}{2}\log\left|\frac{x}{\sqrt{1+x^2}}\right| + C$ (d) none of these

26. $\int x\tan^{-1}x dx = ?$

(a) $\frac{1}{2}\tan^{-1}x + \log(1+x^2) - \frac{1}{2}x + C$ (b) $\frac{1}{2}x^2\tan^{-1}x + \frac{1}{2}x + C$

(c) $\frac{1}{2}(1+x^2)\tan^{-1}x - \frac{1}{2}x + C$ (d) none of these

27. $\int \tan^{-1}\sqrt{x}dx = ?$

(a) $(x-1)\tan^{-1}\sqrt{x} + \sqrt{x} + C$ (b) $(x+1)\tan^{-1}\sqrt{x} - \sqrt{x} + C$

(c) $\frac{1}{2}\sqrt{x}\tan^{-1}\sqrt{x} - \frac{1}{2}\sqrt{x} + C$ (d) none of these

28. $\int \cos^{-1}x dx = ?$

(a) $x\cos^{-1}x - \sqrt{1-x^2} + C$ (b) x $\cos^{-1}$ x + $\sqrt{1-x^2} + C$

(c) x $\sin^{-1}$ x - $\sqrt{1-x^2} + C$ (d) none of these

29. $\int \tan^{-1}x dx = ?$

(a) x $\tan^{-1}$x + $\frac{1}{2}\log\left|1+x^2\right| + C$ (b) $x\tan^{-1}x - \frac{1}{2}\log\left|1+x^2\right| + C$

(c) $-x\tan^{-1}x + \frac{1}{2}\log\left|1+x^2\right| + C$ (d) none of these

30. $\int \sec^{-1}x dx = ?$

(a) $x\sec^{-1}x + \log\left|x+\sqrt{x^2-1}\right| + C$ (b) $x\sec^{-1}x - \log\left|x+\sqrt{x^2-1}\right| + C$

(c) $x\sec^{-1}x+\log\left|x-\sqrt{x^2-1}\right|+C$ (d) none of these

31. $\int \sin^{-1}(3x-4x^3)dx=?$

(a) $3\left[x\sin^{-1}x+\sqrt{1-x^2}\right]+C$ (b) $3\left[x\sin^{-1}x-\sqrt{1-x^2}\right]+C$

(c) $\frac{3x^2}{2}+C$ (d) none of these

32. $\int \sin^{-1}\left(\frac{2x}{1+x^2}\right)dx=?$

(a) $2x\tan^{-1}x+\log\left|1+x^2\right|+C$ (b) $2x\tan^{-1}x-\log\left|1+x^2\right|+C$

(c) $2x\sin^{-1}x+\log\left|1+x^2\right|+C$ (d) none of these

33. $\int \tan^{-1}\sqrt{\frac{1-x}{1+x}}dx=?$

(a) $\frac{1}{2}x(\cos^{-1}x)+\frac{1}{2}\sqrt{1-x^2}+C$ (b) $\frac{1}{2}x(\sin^{-1}x)+\frac{1}{2}\sqrt{1-x^2}+C$

(c) $\frac{1}{2}x(\cos^{-1}+x)-\frac{1}{2}\sqrt{1-x^2}+C$ (d) none of these

34. $\int \tan^{-1}\left(\frac{3x-x^3}{1-3x^2}\right)dx=?$

(a) $3x\tan^{-1}x+\frac{3}{2}\log(1+x^2)+C$ (b) $3x\tan^{-1}x-\frac{3}{2}\log(1+x^2)+C$

(c) $3x\cos^{-1}x-\frac{3}{2}\sqrt{1-x^2}+C$ (d) $3x\sin^{-1}x\frac{3}{2}\sqrt{1-x^2}+C$

35. $\int x^2\cos x dx=?$

(a) $x^2\sin x+2x\cos x-2\sin x+C$ (b) $2x\cos x-x\sin x+2\sin x+C$

(c) $x^2\sin x-2x\sin x+2\sin x+C$ (d) none of these

36. $\int \sin x\log(\cos x)dx=?$

(a) cos x log (cos x) – cos x + C (b) –cos x log (cos x) + cos x + C

(c) cos x log (cos x) + cos x + C (d) none of these

37. $\int x \sin x \cos x dx = ?$

(a) $-\frac{1}{4}x\cos 2x + \frac{1}{8}\sin 2x + C$ (b) $\frac{1}{4}x\cos 2x + \frac{1}{8}\sin 2x + C$

(c) $\frac{1}{4}x\cos 2x - \frac{1}{8}\sin 2x + C$ (d) none of these

38. $\int x^3 \cos x^2 dx = ?$

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

(c) $-\frac{1}{2}x^2 \sin x^2 + \frac{1}{2}\cos x^2 + C$ (d) none of these

39. $\int \cos^{-1}\left(\frac{1-x^2}{1+x^2}\right)dx = ?$

(a) $2x \tan^{-1}x + \log(1 + x^2) + C$ (b) $-2x \tan^{-1}x - 2\log(1 + x^2) + C$

(c) $2x \tan^{-1}x - \log(1 + x^2) + C$ (d) none of these

40. $\int x \tan^{-1} x dx = ?$

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

(c) $\frac{1}{2}(x^2+1)\tan^{-1}x + \frac{1}{2}x + C$ (d) none of these

41. $\int \sin(\log x)dx = ?$

(a) $\frac{1}{2}x\sin\log x + \frac{1}{2}x + C$ (b) $\frac{1}{2}x\sin\log x - \frac{1}{2}x\cos(\log x) + C$

(c) $-\frac{1}{2}x\sin(\log x) + \frac{1}{2}x\cos(\log x) + C$ (d) none of these

42. $\int (\sin^{-1} x)^2 dx = ?$

(a) $\frac{2\sin^{-1}x}{\sqrt{1-x^2}} + C$ (b) $\frac{1}{3}(\sin^{-1}x)^3 + \frac{1}{\sqrt{1-x^2}} + C$

(c) $x(\sin^{-1}x)^2 + (\sin^{-1}x)\sqrt{1-x^2} + 2x + C$ (d) $x(\sin^{-1}x)\sqrt{1-x^2} - 2x + C$

43. $\int e^x \left\{\frac{1}{x} - \frac{1}{x^2}\right\} dx = ?$

(a) $e^x \left\{\log x + \frac{1}{x}\right\} + C$ (b) $xe^x - e^x + C$ (c) $e^x . \frac{1}{x} + C$ (d) none of these

44. $\int e^x \left(\frac{1}{x^2} - \frac{2}{x^3}\right) dx = ?$

(a) $\frac{-e^x}{x^2} + C$ (b) $\frac{e^x}{x^2} + C$ (c) $e^x \left(\frac{-1}{x} + \frac{1}{x^2}\right) + C$ (d) none of these

45. $\int e^x \left\{\sin^{-1}x + \frac{1}{\sqrt{1-x^2}}\right\} dx = ?$

(a) $e^x . \frac{1}{\sqrt{1-x^2}} + C$ (b) $e^x \sin^{-1}x + C$ (c) $\frac{-e^x}{\sin^{-1}x} + C$ (d) none of these

46. $\int e^x (\tan x + \log \sec x) dx = ?$

(a) $e^x \log \sec x + C$ (b) $e^x \tan x + C$ (c) $e^x (\log \cos x) + C$ (d) none of these

47. $\int e^x (\cot x + \log \sin x) dx = ?$

(a) $e^x \cot x + C$ (b) $e^x \log \sin x + C$ (c) $e^x \sin x + C$ (d) none of these

48. $\int e^x [\sec x + \log(\sec x + \tan x)] dx = ?$

(a) $e^x \log(\sec x + \tan x) + C$ (b) $e^x \sec x + C$ (c) $e^x \log \tan x + C$ (d) none of these

49. $\int e^x \left\{\tan^{-1}x + \frac{1}{(1+x^2)}\right\} dx = ?$

(a) $e^x . \frac{1}{(1+x^2)} + C$ (b) $e^x \tan^{-1}x + C$ (c) $-e^x \cot^{-1}x + C$ (d) none of these

50. $\int e^x (\tan x - \log \cos x) dx = ?$

(a) $e^x \tan x + C$ (b) $e^x \log \cos x + C$ (c) $e^x \log \sec x + C$ (d) none of these

51. $\int e^x (\cot x - \cos ec^2 x) dx = ?$

(a) $-e^x \operatorname{cosec}^2 x + C$ (b) $e^x \cot x + C$ (c) $-e^x \cot x + C$ (d) none of these

52. $\int e^x(\sin x + \cos x)dx = ?$

(a) $e^x \sin x + C$ (b) $e^x \cos x + C$ (c) $e^x \tan x + C$ (d) none of these

53. $\int e^x \sec x(1 + \tan x)dx = ?$

(a) $e^x (1 + \tan x) + C$ (b) $e^x \sec x + C$ (c) $e^x \tan x + C$ (d) none of these

54. $\int e^x \left(\frac{1 + x\log x}{x}\right)dx = ?$

(a) $e^x.\frac{1}{x} + C$ (b) $e^x \log x + C$ (c) $xe^x \log x + C$ (d) none of these

55. $\int e^x . \frac{x}{(1+x)^2}dx = ?$

(a) $e^x . \frac{1}{(1+x)} + C$ (b) $e^x.\frac{1}{x} + C$ (c) $e^x . \frac{x}{(1+x)} + C$ (d) none of these

56. $\int e^x \left(\frac{1 + \sin x}{1 + \cos x}\right)dx = ?$

(a) $e^x \sin\frac{x}{2} + C$ (b) $e^x \cos\frac{x}{2} + C$ (c) $e^x \tan\frac{x}{2} + C$ (d) none of these

ANSWERS: INDEFINITE INTEGRALS-IIII

1. (c)	2. (b)	3. (a)	4. (b)	5. (c)	6. (c)	7. (b)	8. (d)	9.(b)	10. (a)
11.(d)	12.(d)	13.(c)	14.(c)	15.(c)	16.(b)	17.(b)	18.(b)	19. (a)	20.(b)
21.(b)	22.(c)	23.(d)	24.(c)	25.(b)	26.(c)	27.(b)	28. (a)	29.(b)	30.(b)
31.(a)	32.(b)	33.(c)	34.(b)	35.(a)	36.(b)	37.(a)	38.(b)	39.(c)	40.(a)
41.(b)	42.(d)	43.(c)	44.(b)	45.(b)	46.(a)	47.(b)	48.(a)	49.(b)	50.(c)
51.(b)	52.(a)	53.(b)	54.(b)	55.(a)	56.(c)				

INDEFINITE INTEGRALS-IV

1. $\int \frac{dx}{(9+x^2)} = ?$

(a) $\tan^{-1}\frac{x}{3}+C$ (b) $\frac{1}{3}\tan^{-1}\frac{x}{3}+C$ (c) $3\tan^{-1}\frac{x}{3}+C$ (d) none of these

2. $\int \frac{dx}{(4+16x^2)} = ?$

(a) $\frac{1}{32}\tan^{-1}4x+C$ (b) $\frac{1}{16}\tan^{-1}\frac{x}{2}+C$ (c) $\frac{1}{8}\tan^{-1}2x+C$ (d) $\frac{1}{4}\tan^{-1}\frac{x}{2}+C$

3. $\int \frac{dx}{(9+4x^2)}dx = ?$

(a) $\frac{1}{2}\tan^{-1}\frac{2x}{3}+C$ (b) $\frac{1}{6}\tan^{-1}\frac{2x}{3}+C$ (c) $\frac{1}{6}\tan^{-1}\frac{3x}{2}+C$ (d) none of these

4. $\int \frac{\sin x}{(1+\cos^2 x)}dx = ?$

(a) $-\tan^{-1}(\cos x)+C$ (b) $\cot^{-1}(\cos x)+C$ (c) $-\cot^{-1}(\cos x)+C$ (d) $\tan^{-1}(\cos x)+C$

5. $\int \frac{\cos x}{(1+\sin^2 x)}dx = ?$

(a) $-\tan^{-1}(\sin x)+C$ (b) $\tan^{-1}(\cos x)+C$ (c) $\tan^{-1}(\sin x)+C$ (d) $-\tan^{-1}(\cos x)+C$

6. $\int \frac{e^x}{(e^{2x}+1)}dx = ?$

(a) $\cot^{-1}(e^x)+C$ (b) $\tan^{-1}(e^x)+C$ (c) $2\tan^{-1}(e^x)+C$ (d) none of these

7. $\int \frac{3x^5}{(1+x^{12})}dx = ?$

(a) $\tan^{-1}x^6+C$ (b) $\frac{1}{4}\tan^{-1}x^6+C$ (c) $\frac{1}{2}\tan^{-1}x^6+C$ (d) none of these

8. $\int \frac{2x^3}{(4+x^8)}dx = ?$

(a) $\frac{1}{2}\tan^{-1}\frac{x^4}{2}+C$ (b) $\frac{1}{4}\tan^{-1}\frac{x^4}{2}+C$ (c) $\frac{1}{2}\tan^{-1}x^4+C$ (d) none of these

9. $\int\frac{dx}{(x^2+4x+8)}=?$

(a) $\frac{1}{2}\tan^{-1}\left(\frac{x+2}{2}\right)+C$ (b) $\frac{1}{2}\tan^{-1}\left(\frac{x+2}{2}\right)+C$ (c) $\frac{1}{2}\tan^{-1}(x+2)+C$

(d) $\tan^{-1}\left(\frac{x+2}{2}\right)+C$

10. $\int\frac{dx}{(2x^2+x+3)}=?$

(a) $\frac{1}{\sqrt{23}}\tan^{-1}\left(\frac{4x+1}{\sqrt{23}}\right)+C$ (b) $\frac{1}{\sqrt{23}}\tan^{-1}\left(\frac{x+1}{\sqrt{23}}\right)+C$

(c) $\frac{2}{\sqrt{23}}\tan^{-1}\left(\frac{4x+1}{\sqrt{23}}\right)+C$ (d) none of these.

11. $\int\frac{dx}{(e^x+e^{-x})}=?$

(a) $\tan^{-1}(e^x)+C$ (b) $\tan^{-1}(e^{-x})+C$ (c) $-\tan^{-1}(e^{-x})+C$ (d) none of these

12. $\int\frac{x^2}{(9+4x^2)}=?$

(a) $\frac{x}{4}-\frac{1}{8}\tan^{-1}\frac{x}{3}+C$ (b) $\frac{x}{4}-\frac{3}{8}\tan^{-1}\frac{x}{3}+C$

(c) $\frac{x}{4}-\frac{3}{8}\tan^{-1}\frac{2x}{3}+C$ (d) none of these .

13. $\int\frac{(x^2-1)}{(x^2+4)}dx=?$

(a) $x-5\tan^{-1}\frac{x}{2}+C$ (b) $x-\frac{5}{2}\tan^{-1}\frac{x}{2}+C$ (c) $x-\frac{5}{2}\tan^{-1}\frac{5x}{2}+C$ (d) none of these

14. $\int\frac{dx}{(4+9x^2)}=?$