INDEFINITE INTEGRALS-II

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

(a) $\frac{(2x+3)^6}{6}+C$ (b $\frac{(2x+3)^4}{8}+C$ (c) $\frac{(2x+3)^6}{12}+C$ (d)none of these

2. $\int (3-5x)^7 dx = ?$

(a) -5(3 – 5x)^6+ C (b) $\frac{(3-5x)8}{-40}+C$ (c) $\frac{-5(3-5x)^8}{8}+C$ (d)none of these

3. $\int \frac{1}{(2-3x)^4} dx = ?$

(a) $\frac{1}{15(2-3x)^5}+C$ (b) $\frac{1}{-12(2-3x)^3}+C$ (c) $\frac{1}{9(2=3x)^3}+C$ (d)none of these

4. $\int \sqrt{ax+b}dx = ?$

(a) $\frac{2(ax+b)^{3/2}}{3a}+C$ (b) $\frac{3(ax+b)^{3/2}}{2a}+C$ (c) $\frac{1}{2\sqrt{ax+b}}+C$ (d)none of these

5. $\int \sec^2(7-4x)dx = ?$

(a) $\frac{1}{4}\tan(7-4x)+C$ (b) $\frac{-1}{4}\tan(7-4x)+C$ (c)4tan(7– 4x)+C (d)-4tan(7 -4x)+C

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

(a) $\frac{1}{3}\sin 3x+C$ (b) $\frac{1}{3}\sin 3x+C$ (c) 3 sin 3x + C (d) -3 sin 3x + C

7. $\int e^{(5-3x)}dx = ?$

(a) -3e$^{(5-3x)}$ +C (b) $\frac{1}{3}e^{(5-3x)}+C$ (c) $\frac{e^{(5-3x)}}{-3}+C$ (d) none of these

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

(a) $\frac{3}{(\log 2)}.2^{(3x+4)}+C$ (b) $\frac{2^{(3x+4)}}{3(\log 2)+C}$

c) $\frac{2^{(3x+4)}}{2(\log 3)}+C$ (d) none of these

9. $\int \tan^2 \frac{x}{2}dx = ?$

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

(c) $2\tan\frac{x}{2}+x+C$ (d) $2\tan\frac{x}{2}-x+C$

10. $\int \sqrt{1-\cos x}dx = ?$

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

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

11. $\int \sqrt{1+\sin x}dx = ?$

(a) $-\sqrt{2}\sin\left(\frac{\pi}{4}-\frac{x}{2}\right)$+C (b) $\sqrt{2}\sin\left(\frac{\pi}{4}-\frac{x}{2}\right)$ (c) $-2\sqrt{2}\sin\left(\frac{\pi}{4}-\frac{x}{2}\right)$ (d) none of these

12. $\int \sin^3 x dx$ =?

(a) $-\frac{3}{4}\cos x+\frac{\cos 3x}{12}+C$ (b) $\frac{3}{4}\cos x+\frac{\cos 3x}{12}+C$

(c) $-\frac{3}{4}\cos x-\frac{\cos 3x}{12}+C$ (d) none of these

13. $\int \frac{\log x}{x}dx$ =?

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

14. $\int \frac{\sec^2(\log x)}{x}dx$ =?

(a) log(tanx)+C (b)-log(tanx)+C (c)tan(tanx) (d) –tan(logx)+C

15. $\int \frac{1}{x(\log x)} dx = ?$

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

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

(a) $e^{x3} x^2 + C$ (b) $\frac{1}{3} e^{x^3} + C$ (c) $\frac{1}{6} e^{x^3} + C$ (d) none of these

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

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

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

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

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

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

20. $\int (\sqrt{\sin x}) \cos x dx = ?$

(a) $\frac{2}{3}(\cos x)^{3/2} + C$ (b) $\frac{3}{2}(\cos x)^{3/2}$ (c) $\frac{2}{3}(\sin x)^{3/2} + C$ (d) $\frac{3}{2}(\sin x)^{3/2} + C$

21. $\int \frac{1}{(1+x^2)\sqrt{\tan^{-1} x}}$ dx=?

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

22. $\int \frac{\cot x}{\log(\sin x)} dx = ?$

(a) $\log|\cot x|+C$ (b) $\log|\cot x\cos ecx|+C$ (b) $\log|\log\sin x|+C$ (d) none of these

23, $\int\frac{1}{x\cos^2(1+\log x)}dx=?$

(a) Tan(1 + log x) + C (b) cot (1 + log x) + C
(b) (c) sec (1 + log x) +C (d) none of these

24. $\int\frac{x^2\tan^{-1}x^3}{(1+x^6)}$ dx= ?

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

25. $\int\sec^5 x\tan xdx=?$

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

26. $\int$ cosec^3 (2x + 1) cot (2x + 1)dx =?

(a) $\frac{1}{4}\cos ec^4(2x+1)+C$ (b) $\frac{1}{3}\cos ec^{\ 3}$(2x + 1) +C

(c) $-\frac{1}{6}\cos ec^3$(2x + 1) + C (d) $\frac{1}{2}\cos e$c(2x + 1) cot (2x + 1) + C =

27. $\int\frac{\tan(\sin^{-1})}{\sqrt{1-x^2}}dx=?$

(a) $\log|\sec(\sin^{-1}x)|+C$ (b) $\log\left|\cos(\sin^{-1}x)\right|+C$ (c) $\tan(\sin^1 x)+C$ (d) none of these

28. $\int-\frac{\tan(\log x)}{x}dx=?$

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

(d) $-\log|\cos(\log x)|+C$

29. $\int e^x\cot(e^x)dx=?$

(a) cot (e^x) + C (b) $\log\left|\sin e^x\right|+C$ (c) $\log|\cos ece^x|+C$ (d) none of these

30. $\int\frac{e^x}{\sqrt{1+e^x}}dx=?$

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

31 $\int \frac{x}{\sqrt{1-x^2}}dx = ?$

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

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

(a) tan (ex^x) + C (b) cot (xe^x) + C (c) ex^x tan x + C (d) none of these

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

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

34. $\int \frac{2^X}{1-4^X}dx = ?$

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

(d) ($\log_2$ e)$\sin^{-1}(2^x)$ +C

35. $\int \frac{dx}{(e^x-1)} = ?$

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

36. $\int \frac{1}{\sqrt{x}+x)}dx = ?$

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

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

37. $\int \frac{dx}{(1+\sin x)} = ?$

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

38. $\int \frac{\sin x}{(+\sin x)} dx = ?$

(a) x + tan x – sec x +C (b) x – tan x – sec x + C (c) x – tan x + sec x + C
(d) none of these

39. $\int \frac{\sin x}{(1-\sin x)} dx = ?$

(a) –x + sec x – tan x +C (b) x + cos x – sin x + C

(c) –log $|1-\sin x|+C$ (d) none of these

40. $\int \frac{dx}{(1+\cos x)} = ?$

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

41. $\int \frac{dx}{(1-\cos x)} = ?$

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

42. $\int \left\{\frac{1-\tan\frac{x}{2}}{1+\tan\frac{x}{2}}\right\} dx = ?$

(a) 2log $\left|\sec\frac{x}{2}\right|+C$ (b) 2 log $\left|\cos\frac{x}{2}\right|+C$ (c) 2log $\left|\text{Sec}\left(\frac{\pi}{4}-\frac{x}{2}\right)\right|$ +C

(d) 2log $\left|\cos\left(\frac{\pi}{4}-\frac{x}{2}\right)\right|$ +C

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

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

44. $\int \frac{\cos x}{(1+\cos x)} dx = ?$

(a) x + tan $\frac{x}{2}+C$ (b) –x + tan $\frac{x}{2}+C$ (c) x – tan $\frac{x}{2}+C$ (d) none of these

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

(a) tan x – cot x + C (b) tan x + cot x + C

(c) –tan x + cot x + C (d) none of these

46. $\int \frac{(1-\cos 2x)}{(1+\cos 2x)} dx = ?$

(a) tan x + x + C (b) tan x – x + C

(c) -tan x + x + C (d) none of these

47. $\int \frac{(1-\cos 2x)}{(1+\cos 2x)} dx = ?$

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

48. $\int \frac{1}{\sin^2 x \cos^2 x} dx = ?$

(a) tan x + cot x + C (b) tan x – cot x + C

(c) –tan x + cot x + C (d) none of these

49. $\int \frac{\cos 2x}{\cos^2 x \sin^2 x} dx = ?$

(a) cot x + tan x + C (b) –cot x + tan x + C

(c) cot x – tan x + C (d) –cot x – tan x + C

50. $\int \frac{(\cos 2x - \cos 2a)}{(\cos x - \cos \alpha)} dx = ?$

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

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

51. $\int \tan^{-1}\left\{\frac{1-\cos 2x}{1+\cos 2x}\right\} dx = ?$

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

52. $\int \tan^{-1}(\sec x + \tan x)dx = ?$

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

53. $\int \frac{(1+\sin x)}{(1-\sin x)} dx = ?$

(a) 2tan x + x – 2sec x + C (b) 2tan x – x + 2sec x + C

(c) 2tan x – x – 2sec x + C (d) none of these

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

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

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

55. $\int \frac{\sin(x-\alpha)}{\sin(x+\alpha)} dx = ?$

(a) x cos $2\alpha - \sin 2\alpha . \log|\sin(x+\alpha)| + C$

(b) x cos $2\alpha + \sin 2\alpha . \log|\sin(x+\alpha)| + C$

(c) x cos $2\alpha + \sin \alpha . \log|\sin(x+\alpha)| + C$

(d) none of these

56. $\int \frac{1}{(\sqrt{x+3} - \sqrt{x+2})} dx = ?$

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

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

57. $\int \frac{(1+\tan x)}{(1-\tan x)} dx = ?$

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

(c) log $|\cos x + \sin x| + C$ (d) none of these

58. $\int \frac{3x^2}{(1+x^6)} dx = ?$

(a) $\sin^{-1} x^3 + C$ (b) $\cos^{-1} x^3 + C$ (c) $\tan^{-1} x^3 + C$ (d) $\cot^{-1} x^3 + C$

59. $\int \frac{dx}{x\sqrt{x^6 - 1}} = ?$

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

60. $[(2x+1)\sqrt{x^2 + x + 1}]dx = ?$

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

(c) $\frac{3}{2}(2x+1)^{3/2} + C$ (d) none of these

61. $\int \frac{dx}{[\sqrt{2x+3} + \sqrt{2x-3}]} = ?$

(a) $\frac{1}{18}(2x+3)^{3/2} + \frac{1}{18}(2x-3)^{3/2} + C$ (b) $\frac{1}{18}(2x+3)^{3/2} - \frac{1}{18}(2x-3)^{3/2} + C$

(c) $\frac{1}{12}(2x+3)^{3/2} - \frac{1}{12}(2x-3)^{3/2} + C$ (d) none of these

62. $\int \tan x dx = ?$

(a) $\log|\cos x| + C$ (b) $-\log|\cos x| + C$ (c) $\log|\sin x| + C$
(d) $-\log|\sin x|$ + C

63. $\int \sec x dx = ?$

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

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

64. $\int \cos ecx dx = ?$

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

(c) $\log|\cos ecx + \cot x| = C$ (d) none of these

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

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

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

66. $\int \frac{\tan x}{(\sec x + \cos x)} dx = ?$

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

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

67. $\int \sqrt{\frac{1+x}{1-x}} dx = ?$

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

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

68. $\int \frac{1}{x^2} e^{-1/x} dx = ?$

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

69. $\int \frac{x^3}{(1+x^8)} dx = ?$

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

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

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

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

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

72. $\int \frac{dx}{(2-3x)} = ?$

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

73. $\int x\sqrt{x^2 - 1} dx = ?$

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

74. $\int 3^{(5-3x)} dx = ?$

(a) $\frac{-3^{(5-3x)}}{3(\log 3)} + C$ (b) $\frac{3^{(4-3x)}}{(\log 3)} + C$ (c) $-3^{(5-3x)} \log 3 + C$ (d) none of these

75. $\int e^{\tan x} \sec^2 x dx = ?$

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

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

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

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

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

78. $\int \frac{e^{\sqrt{x}} \cos(e^{\sqrt{x}})}{\sqrt{x}} dx = ?$

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

79. $\int x^2 \sin x^3 dx = ?$

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

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

(a) tan (xe^x) +C (b) –tan (xe^x) +C (c) cot (xe^x) +C (d) none of these

81. $\int \frac{1}{x\sqrt{x^4-1}}dx = ?$

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

82. $\int x\sqrt{x-1}dx = ?$

(a) $\frac{2}{3}(x-1)^{3/2}+C$ (b) $\frac{2}{5}(x-1)^{3/2}+C$ (c) $\frac{2}{5}(x-1)^{5/2}+\frac{3}{2}(x-1)^{3/2}+C$

(d) none of these

83. $\int x\sqrt{x^2-x}dx = ?$

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

84. $\int \frac{dx}{(1+\sqrt{x})} = ?$

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

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

85. $\int \sqrt{e^x-1}dx$

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

86. $\int \frac{\sin x}{(\sin x - \cos x)} dx = ?$

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

(c) $\log|\sin x - \cos x| + C$ (d) none of these

87. $\int \frac{dx}{(1 - \tan x)} = ?$

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

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

88. $\int \frac{dx}{(1 - \cot x)} = ?$

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

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

89. $\int \frac{\sec^2 x}{\sqrt{1 - \tan^2 x}} dx = ?$

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

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

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

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

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

91. $\int \frac{\sin^6 x}{\cos^8 x} dx = ?$

(a) $\frac{1}{7}\tan^7 x + C$ (b) $\frac{1}{7}\sec^7 x + C$ (c) 5log $|\cos^6 x| + C$ (d) none of these

92. $\int \sec^5 x \tan x dx = ?$

(a) $\frac{1}{5}\tan^5 x + C$ (b) $\frac{1}{5}\sec^5 x + C$ (c) 5 log $|\cos x| + C$ (d) none of these

93 . $\int \tan^5 x dx = ?$

(a) $\frac{1}{6}\tan^6 x + c$ (b) $\frac{1}{4}\tan^4 x + \frac{1}{2}\tan^2 x + \log|\sec x| + C$

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

94. $\int \sin^3 x \cos^3 x dx = ?$

(a) $\frac{1}{4}\cos^4 x + \frac{1}{6}\cos^6 x + C$ (b) $\frac{1}{4}\sin^4 x - \frac{1}{6}\sin^6 x + C$

(c) $\frac{1}{4}\sin^4 x + \frac{1}{6}\cos^6 x + C$ (d) none of these

95. $\int \sec^4 x \tan x dx = ?$

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

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

96. $\int \frac{\log \tan x}{\sin x \cos x} dx = ?$

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

(c) log(sinxcosx) (d) none of these

97. $\int \sin^3(2x+1) dx = ?$

(a) $\frac{1}{8}\sin^4(2x+1) + C$ (b) $\frac{1}{2}\cos(2x+1) + \frac{1}{3}\cos^3(2x+1) + C$

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

98. $\int \frac{\sqrt{\tan x}}{\sin x \cos x}dx = ?$

(a) $2\sqrt{\tan x}+C$ (b) $2\sqrt{\cot x}+C$ (c) $2\sqrt{\sec x}+C$ (d) none of these

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

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

(c) $\log|\cos x+\sin x|+C$ (d) none of these

100. $\int \sqrt{e^x-1}dx = ?$

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

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

101. $\int \frac{dx}{\sqrt{\sin^3 x\cos x}} = ?$

(a) $2\sqrt{\tan x+C}$ (b) $2\sqrt{\cot x}+C$ (c) $-2\sqrt{\tan x}+C$ (d) $\frac{-2}{\sqrt{\tan x}}$ +C

ANSWERS: INDEFINITE INTEGRALS-II

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

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