



TEST OF MATHEMATICS

CLASS XII

TIME : 2 HOURS

MAX MARKS: 50

Q.1. $\int \frac{\sec x}{\sec x + \tan x} dx$ (4)

Q.2. $\int \frac{x^2}{(a+bx)^2} dx$ (4)

Q.3. $\int \frac{\sin(x-a)}{\sin(x+b)} dx$ (4)

Q.4. $\int \frac{dx}{x\{6(\log x)^2 + 7\log x + 2\}}$ (4)

Q.5. $\int \frac{dx}{x(x^4-1)}$ (4)

Q.6. $\int \frac{x^3+x}{x^4-9} dx$ (4)

Q.7. Prove that $\int_0^\pi \frac{x dx}{a^2 \cos^2 x + b^2 \sin^2 x} = \frac{\pi^2}{2ab}$ (4)

Q.8. Using limit of sum $\int_0^4 (x + e^{2x}) dx$ (4)

Q.9. $\int e^x \left[\frac{x^2+1}{(x+1)^2} \right] dx$ (4)

Q.10. $\int \frac{x \cos^{-1} x}{\sqrt{1-x^2}} dx$ (4)

Q.11. $\int \frac{x - \sin x}{1 - \cos x} dx$ (5)

Q.12. $\int \cos^{-1} \sqrt{x} dx$ (5)