# SELF ASSESSMENT TEST -8

## CLASS 10+2

### *INTEGRALS*

1.Evaluate (a) $\int \frac{x^3}{x-1}dx$ (b) $\int \frac{1}{1+\sin x}dx$ .(c) $\int \frac{x}{\sqrt{x+4}}dx$ .(d) $\int \frac{1}{\sqrt{x+3}-\sqrt{x+2}}dx$ .

2.prove that $\int \cos ecxdx = \log\left|\tan\frac{x}{2}\right| + c$ .

3. Evaluate (a) $\int \sin^3 x\cos^4 xdx$ .(b) $\int \frac{\sin 2x}{a\cos^2 x + b\sin^2 x}dx$ (c) $\int \frac{1}{\sqrt{x}+x}dx$ .

4.Evaluate (a) $\int \cos ec^4 xdx$ . (b) $\int \frac{1+\tan x}{x+\log\sec x}dx$ .(c) $\int \frac{\cos x - \sin x}{1+\sin 2x}dx$

5.Evaluate (a) $\int \frac{1-\tan x}{1+\tan x}dx$ . (b) $\int \frac{e^{4x}-1}{e^{4x}+1}dx$ .(c) $\int \frac{\sec^2\left(2\tan^{-1}x\right)}{1+x^2}dx$ .

6.Evaluate (a) $\int \frac{e^x(1+x)}{\cos^2\left(xe^x\right)}dx$ (b) $\int \frac{\sin x}{\sin(x-a)}dx$ .

7.Evaluate (a) $\int \frac{1}{\sin(x-a)\cos(x-b)}dx$ . (b) $\int \frac{1}{\cos(x-a)\cos(x-b)}dx$