<u>CLASS 12</u> MATHEMATICS CCT QUESTIONS

Let f(x) be a function and f ʿ (x) be its derivative then

$\int e^x$ **[f(x)+ f ʿ (x)] dx** $= e^x$ **f(x) + C**

On the basis of above information, answer the following questions.

1. If $\int e^x$ cosecx (1- cosecx cotx) dx = $e^x\ f(x) + C$, find the value of f(x)

a) cosecx b) - cosecx c) 1 d) – cosecx cotx

2. *Find the value of* $\int\{\tan tan\,(logx) + sec^2\,(logx)\}dx$

a) x tan(logx) +c b) tan(logx)+c c) sec^2(logx)+c d) None of these

3. $\int e^x\ (\frac{2-sin2x}{1-cos2x})$ dx is

a) e^x cotx +c b) - e^x tanx+ e^x

c)e^x tanx+ c d) - e^x cotx + c

4. *Evaluate* $\int \frac{e^x}{x}\{\ x(logx)^2 + 2logx\ \}$ dx

a) e^x (logx) + c b) e^x $(logx)^2$ + c

c) $\frac{e^x}{x} logx + c$ d) None of these

5. $\int (\frac{x-1}{x^2})e^x$ dx = e^xf(x) + c ,then find the value of f(x)

a) $\frac{1}{x^2}$ b) $\frac{-1}{x}$ c) $\frac{1}{x}$ d) e^x

ANSWERS

1). a 2) a 3) d 4) b 5) c