**CLASS 12 MATHEMATICS CCT QUESTIONS**

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

$\int e^x$ **[ f(x)+ f ' (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 = $e^x$f(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