

Full Name:

ID:

Serial Number:

**Question 1** Evaluate the following integrals:

a)  $\int e^{x \ln(a^2+1)} dx$

b)  $\int \csc^4 x (1 - \cot^2 x) dx$

c)  $\int \operatorname{sech}(\ln x) dx$

d)  $\int e^{-3x} \sin(2x) dx$

e)  $\int \csc^8(3x) \cot^3(3x) dx$

f)  $\int \sin(\ln x) dx$

g)  $\int \sin(3x) \cos(2x) dx$