Chem. 540

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## Math Problem 5

Expand the following functions in Taylor series about x = 0 up to quadratic terms. Show your work.

- (a)  $e^x$  (b)  $xe^{-x^2}$  (c)  $\cos x$  (d)  $\ln(1+x)$  (e)  $\sqrt{1+x^2}$  (f)  $x^4-x^2$