Unified Engineering II   **Spring 2004**

Problem S12 (Signals and Systems)

For each signal below, find the bilateral Laplace transform (including the region of convergence) by directly evaluating the Laplace transform integral. If the signal does not have a transform, say so.

1. $g(t) = \sin(at)\sigma(-t)$

2. $g(t) = te^{at}\sigma(-t)$

3. $g(t) = \cos(\omega_0 t)\, e^{-a|t|}$, for all t