

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 301 Quiz 3
First Semester 2008–2009(081)

Name: _____

ID #: _____

Sec#: _____

1. If $f(t) = te^t + \int_0^t \tau f(t - \tau) d\tau$ and F is the Laplace transform of f , find $F(s)$.

2. Use the Laplace transform to solve the equation

$$y'' - 2y' + y = e^t, \quad y(0) = 0, \quad y'(0) = 5.$$