

MAP 3306 eMath2 **Quiz 7** 13 Jul 2007 Name: _____

Directions: Show **ALL** work for credit; Give **EXACT** answers when possible; **SIMPLIFY** your answers;

1. Find the steady state solution of the non-homogeneous problem $u_t = c^2 u_{xx} + Ne^{-ax}$, when the constants $c^2 = 1$, $N = 12$ and $a = 2$; with boundary conditions $u(0, t) = 0$ and $u(1, t) = 0$.