# Quiz No. 4 — Math202, A First Course in Differential Equations, Sem112

Section: _____ Name: _____ ID: _____

**Problem 1.**(2 points.) Give operators that annihilate the following functions:

(a): $e^{7x} + \frac{x}{2} + 5$

(b): $x^2 + e^x Sinx + 2xe^x Cosx$

**Problem 2.**(3 points.) Use method of undetermined coefficients to solve $y'' + y = x$. (give all steps).

**Problem 3.**(3 points.)The solution of the associated homogeneous differential equation to $y'' - y = 1/x$ is $y_c = C_1 e^x + C_2 e^{-x}$. Use this solution to determine $y_p$.