

Math 202-172 Quiz 3.

Name\_\_\_\_\_ Section\_\_ Serial #\_\_Id\_\_\_\_\_

***Your quiz will not be graded if you do not write your serial number.***

Q1: (a) Give the general solution of the homogeneous equation

$$y'' + y = 0.$$

(b) Find a particular solution of  $y'' + y = \sin x + \cos x$ - using the annihilator method.

Q2: Find annihilator of lowest order of  $\sin^3 x$ .

Q3: Solve the equation  $y'' + y = \tan x$

Q4: Convert the equation  $y''(t) + y'(t) = 0$  to a Cauchy Euler equation.