Quiz No: 3 Math202 Name:_____ID_____Section ____

Q1. Verify that $\{\cos(\ln x), \sin(\ln x)\}$ form a fundamental set of solutions of $x^2y'' + xy' + y = 0$ **on** $(0,\infty)$.

Q2. Verify that $y_p = x^2 + 3x$ is a particular solution of the $y'' - 6y' + 5y = 5x^2 + 3x - 16$.

Q3. $y_1 = 2x^2$ is a solution of $x^2y'' - 3xy' + 4y = 0$. Find general solution of the equation on $(0,\infty)$.