MATH 202.18 (Term 112)
Quiz 4 (Sects. 4.5-4.7) **Duration: 20mn**

Name: **ID number:**

1.)Find the form of a particular solution for $y''' - 2y'' + y' = x - 2x^2 + 3e^x + e^{-x}\cos 4x.$
2.)Solve the boundary value problem $x^2y'' - 3xy' + 3y = xe^x$, $y(1) = 0$, $y(2) = 0.$
3.)Consider the DE $x^3y''' + 3x^2y'' + xy' - y = \ln x.$
a.)Transform into a linear DE with constant coefficients.
b.) Find the general solution of the DE in a.).
