

**QUIZ NO; 1**

Name: \_\_\_\_\_ ID: \_\_\_\_\_ Section \_\_\_\_\_

Q1. (5 points) Solve the first order linear differential equation if  $x^2 \frac{dy}{dx} + xy = x^2 e^x$  with  $y(1)=1$

Q2. (5 points) Find a condition under which  $(x^2 + c_1 xy)dx + (x^2 + y^2)dy = 0$  is exact. Also, solve the equation.

