# Final Exam – Math 225

Fall 2013 –

**Exercise 1:** Solve the given initial value problem and give the largest interval I over which the solution is defined:

**Exercise 2**: Solve the given initial value problem

**Exercise 3**: Solve the given differential equation

**Exercise 4**: Solve the given differential equation by variation of parameters

**Exercise 5**: Solve the given system of differential equations

**Exercise 6**: Solve the given differential equation using power series

**Exercise 7**:

1. Find the Laplace transform of the function
2. Find the inverse Laplace transform
3. Use Laplace transform to solve the given differential equation