Final Exam Topics

1. Old Material

First Order Equations:

a. Separation
b. Linear equations
c. Exactness
d. Bernoulli Equations

Second Order Equations:

a. Reduction of Order
b. Constant Coefficient using Undetermined Coefficients
c. Variation of Parameters
d. Euler-Cauchy Equations

2. Laplace Transforms (use of Table allowed).

a. Computation of Laplace transforms.
b. Computation of inverse Laplace transforms.
c. Solving Equations using Laplace transforms.

The students will get a copy of the Table attached to the Final. The students should know how to manipulate Heaviside and Dirac functions.

3. Series Solutions

a. Power Series (0 is a non-singular point).
b. Method of Frobenius (0 is a regular singular point).

In 3 we will ask to give the coefficients of the solutions up to certain power (x^3, x^4, x^5 or x^6).

NO ELECTRONIC DEVICES IN THE FINAL