Final Exam Overview

To prepare for the final exam it would be wise to study the tests, lecture notes and homework. In particular you should focus on the following materials (the final will cover the topics listed below, possibly all of them)

Reminder: I allow you one page of notes for the final, Front & Back

45%
- U-substitution (§5.5)
- IBP (§5.6)
- Partial Fractions (§5.7)
- Trig-Subst. (§5.7 & notes!)
- Definite Integrals
- Improper Integrals (§5.10)

20%
- Seperation of Variables (§7.3)
- Homogeneous 2nd order DEq"s with initial conditions
- Non-Hom. 2nd order DEq"s

10%
- Volumes (§6.2)
- Areas (§6.1)
- Arclength (§6.3)

25%
- geometric series trick to find power series rep.
- known Maclaurin series to find power series rep.
- using power series to integrate (power series sol" to integrals)
- binomial series (§8.8)
- Taylor series to find 1st few terms in power series. (§8.7)

Not on the final

- numerical integration (L_n, R_n, M_n, Simpsons...)
- averages of fncts.
- applications to physics
- probability
- direction fields, Eulers method
- exponential & Logistic growth
- convergence/divergence tests, I.O.C, radius of convergence
- estimation th"s on series