

## Prepare for the Final Exam

**Time: Dec., 13 from 10:50-1:20**

The Exam will cover all the material covered on the first three Exams ( from **Section 10.1 to Section 12.8**, with the previously indicated omissions).

Only those types of questions which appeared previously on Exams will appear on the Final. Only those definitions and theorems which is specifically asked you to understand on one of the three Exams will appear on the Final. There will be some questions regarding the material from Sections 13.2-13.5.

**13.2:** Be able to find line integrals.

**13.3:** (1) Be able to use the FTC to find line integrals.

(2) Be able to verify if a vector field is conservative.

(3) Be able to compute the work done by moving a particle in a conservative vector field.

**13.4:** Be able to use Gree's theorem for computations.

**13.5:** (1) Be able to compute  $\text{curl}(F)$  for a vector field and tell if a 3dvector field is conservative.

**Review problems:** page 797 problems 2-7 and 11-12.

### **A suggested method of preparation for the final:**

1. spend about 1 hour just leisurely reading your course notes from the entire semester.
2. Read carefully about the guides for 3 previous Exams and for 10.1-12.9.
3. Do the examples given in the guides.
4. " Retake" the three Exams. This is done by covering up your answers from previous Exams, and redoing the problem as stated. When you complete an Exam, compare your answers to those on the answer sheet.
5. If during this retake you have answered a question correctly, you should probably not spend any time reviewing the corresponding material; you are familiar enough with it to do well on the Exam.
6. If during this retake you have answered a question incorrectly, you should make sure you understand the answer presented in the answer sheet. Then go to the appropriate section in the homework, and redo a few similar homework problems (especially those which were assigned to be turned in). Compare your homework answers to those already graded, and to the answer in the book. If you now feel comfortable with this material, redo the original Exam question to test your skill. If you redo it correctly, your review is over. If you are still having trouble, do more problems of that type, see me, etc...
7. Review 13.2-13.5.