[2 Pages of Instructions Provided before EXAM]

Page 1 of 26

Final Exam: Physics 117 FOÀ December 16, 2004 James J. Griffin Physics 2109/Tel.301-405-6118

Physics 117 Final Exam, First Cover Page A) GENERAL INSTRUCTIONS

This exam consists of 60 questions worth two points each for a maximum of 120 points.

ALL ANSWERS MUST BE ENTERED INTO THE NCS ANSWER SHEET BY MEANS OF HEAVY BLACK MARKS WITH A NUMBER 2 PENCIL. (Only a pencil mark will work; the optical scanner cannot read inked answers no matter what color or how dark.)

The questions are numbered from 1 to 60: make sure you enter your single letter answer into the answer line with the same number as the question you are answering.

Only the computer readable NCS answer sheet will be handed in. Keep this exam for you future use.

B) PREPARE YOUR ANSWER SHEET IN ADVANCE:

- 1) SIGN YOUR PERSONAL SIGNATURE INTO THE TOP MARGIN ABOVE THE NAME BOX.
- 2) PRINT YOUR NAME, FAMILY NAME FIRST, INTO THE BOXES PROVIDED AND DARKEN THE CIRCLE FOR THE CORRESPONDING LETTER BELOW EACH BOX
- 3) INSERT YOUR STUDENT ID NUMBER UNDER "IDENTIFICATION NUMBER" AND DARKEN THE CORRESPONDING CIRCLES BELOW EACH NUMBER.
- 4) MAKE NO STRAY MARKS ON THE ANSWER SHEET AND ERASE CLEANLY IF NECESSARY.

C) GENERAL ADVICE

Many students will not have time to finish this exam if they proceed at a leisurely pace. Therefore it is probably advantageous to earmark time-consuming items for later attention and skip forward to questions that can be answered more easily. No subtractions will be made for wrong answers, so that last minute best guessing is probably an advantageous strategy.

IF YOU NEED HELP, ASK!.....AND ASK EARLY RATHER THAN LATE.

ALSO FOR FAIRNESS' SAKE, PLEASE STOP WRITING WHEN THE EXAM ENDS. A PENALTY OF 8% OF THE RAW SCORE MAY BE IMPOSED UPON STUDENTS WHO TRY TO TAKE UNFAIR ADVANTAGE OF THE COLLECTION PROCESS BY CONTINUING TO WRITE AFTER THE END HAS BEEN ANNOUNCED.

Please go to page 2 and answer the exam version identification question there on your NCS sheet as soon as you receive your exam.

Page 2 of 26 (Twenty four pages of exam follow in a separately stapled set.)

Final Exam: Physics 117 F04 December 16, 2004, 1:30-3:30 PM 2109/Tel.301-405-6118 James J. Griffin Physics

Physics 117 Final Exam, Second Cover Page:

The following exam version identification is Question #1 of the exam..... You may as well fill in your answer on your NSC sheet in advance.

MULTIPLE CHOICE: Choose the single BEST answer and darken the corresponding letter on your NCS Scantron sheet

- 1. My Final Exam is identified at the top of page 3 as :
 - a. Version A
 - b. Version B
 - c.
 - d.
 - e

2. Continue with questions 2., 3. and following after the exam has begun.