

Exam Advice for PHY 303L

Before the Exam Starts

As you sit down, check the bubble sheet on your table. It should have your name, student number (SSN) and the exam version number pre-printed and bubbled in. Make sure the name and that SSN are indeed yours (if not, you are probably sitting in somebody else's assigned seat) and that they are spelled and bubbled-in correctly. Remember, a bubble sheet without the correctly bubbled-in SSN and the exam version number cannot be graded. If your SSN is wrong or mis-bubbled or your bubble sheet is damaged, tell this to proctors right away; do not wait until the exam begins. If a proctor gives you a blank bubble sheet to use instead of a bad pre-printed sheet, you should immediately write and bubble in your name, your SSN and the version number of your exam. The proctors will distribute exams at 7 PM sharp. Each student will have a different version of the exam. Before you do anything else, make sure the version number of your problem set is the same as the version number pre-printed on your bubble sheet. Also, make sure your problem set has all the questions (count them; the proctors will announce how many there should be) and that all pages of your set have the same version number – the same as on your bubble sheet. If your problem set is bad or the version numbers do not match, call a proctor immediately, get a new problem set and a blank bubble sheet instead of the preprinted one with a wrong version number. As soon as you get a new bubble sheet, immediately write and bubble in your name, your SSN and the version number of your exam; the version number should be the same as on your new problem set.

During and After the Exam

- Keep your student ID with you during the exam – the proctors will spot-check ID's to make sure the right students are being tested.
- Organize your exam problems: Mark the beginning and the end of each problem. Make up a name for each problem for your own use. Label the problems in a sequential order. Your total number of problems should agree with the number on the board.
- It is desirable to organize your scratch paper: Use only one side to write up your work. Put one problem or at most two problems on one page. Put the problem number(s) on the right-upper corner of each page.
- Please remember that the scanner and the grading computer read your bubbles and not your mind – if you don't bubble in your answer, it does not count. Use a soft pencil to fill the bubbles and fill them completely. The scanning machine does not read ink and it may get confused by partially filled bubbles.
- Do not delay bubbling-in your answers till the last minute of the test, as you may run out of time. It is best to bubble in each answer as soon as you are done with the question. And if you later come back to an already answered question and discover a mistake, use your eraser. Make sure to erase everything cleanly; otherwise, the scanning machine may still read it.
- If you finish answering all questions before the exam is over, use your time to check your answers and make sure they are bubbled in correctly.
- Make sure your pre-printed bubble sheet has correct bubbles for you student number and the version number of your exam. If your bubble sheet is not preprinted, make doubly sure you bubble in your student number (SSN) and the version number. Without this information, your exam cannot be graded and you will receive a zero score.
- At the end of the exam, bring your bubble sheet to the proctors' table. Bring your student ID

with you – the proctors will make sure you are indeed the student whose exam you are turning in.

- Once the proctors announce the exam is over, do not delay turning your bubble sheet in. If you procrastinate, your exam will not be collected and you will get a zero score.
- The solutions to the exam problems will be available on the web – in the same place as the homework solutions – shortly after the end of the exam. The exam scores will also be available on the web after the exam is graded; the grading usually takes a couple of days.

Multiple Choice Problems

- All exam questions are multiple choice. Make sure you read all possible answers proffered on the problem sheet— sometimes a few answers are printed on the next page —before answering the question.
- Remember that a wrong choice gives negative points; this is worse than no answer at all, which gives you exactly zero points. (Specifically, choosing a wrong answer out of N possibilities "earns" you $100\% (N-1)$ of the question's points; for example, a wrong answer on a 5-point, 5-choice question "earns" you -1.25 points.) So, if you are clueless about a particular question, it is better to leave it unanswered. Giving a randomly chosen answer is like playing an honest roulette: The odds are even, but watch out for Murphy's Law.
- On the other hand, if you have rejected several answers as definitely wrong but still cannot choose which of the remaining two or three answers is correct, your best bet is to select the answer you like most. It's a gamble, but now it's a gamble with odds in your favor.
- If you change your mind, make sure to erase your wrong answer cleanly; otherwise, the scanning machine may still read it.
- On numerical multiple-choice questions, the correct answer may be slightly (but only slightly) different from your result because of the round-off errors. You should select the answer that is closest to your result. Note that if your result is nowhere near any of the 10 answers proffered on the problem sheet, then you are probably wrong. On the other hand, if your result is very close to two or more of the 10 proffered answers, you should consult with a proctor (something may be wrong with the problem).
- On questions involving multiple choices of algebraic expressions, first, derive the correct expression, write it on the scratch paper, then compare it to the expressions given on the problem sheet. Select the expression that's algebraically identical to your answer. If none of the expressions fit, consult with a proctor. (Maybe you are wrong, but sometimes the problem is misstated.)

Miscellaneous Advice

- On exams, time is always short. Do not get stuck and spend too much time on one hard question while many easy questions remain un-answered. If a problem feels too hard, move on to the next problem – or to any other problem you know how to solve. Your best strategy is to answer all the easy questions first, then go back to the medium-hard questions and leave the really hard questions for the last part of your exam.
- Some problems are multi-part; i.e. involve several related questions. Often (but not always) the questions can be answered out of sequence. So, if you have difficulty with the first part of a problem, don't give up; instead, take a look at the second (or third, etc.) part and see if you

can solve it first.

- Some problems may be poorly written (you have already seen a few on your homework assignments). If you are confused by a question and are not sure what exactly are you supposed to calculate, ask a proctor to clarify; do not rush to calculate something wrong. Finally, if you need the value of a physical constant (eg., $g=9.8\text{ m/s}^2$) and it's not given in the text of the problem, check your formula sheet. If it's not on the formula sheet either, ask the proctors to write it on the blackboard. You will be given a copy of the course summary sheet containing important equations at the exam. This summary sheet was handed out on the first day of class and is available on the web. **During any exam, questions on these equations will not be answered.** However, at other times your questions are surprisingly welcome.