

Review for Midterm II
PHY 10 (Mar 4 2008)
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UPDATED FEB 28 8:35am
(changes marked in blue)

Basics:

Date of midterm: Tues Mar 4

Time: 9-10:20am

Place: 55 Roessler

Bring: Your own bluebooks (*any size*) scantron sheet (*a blue UCD 2000 scantron*) from the bookstore. Also your own pens and pencils.

Calculators: Are likely to be useful. *NOTE: Calculators only, no palm pilots, cellphones or other equipment with additional capabilities. Standard graphing calculators are ok.*

Your own notes/books: **Not permitted**

Equations: All equations required will be provided on a special section of the exam sheet. However, they will not be labeled in any way.

Fundamental constants: You will not be required to memorize any of these.

Conversion between units: Some will be provided on the exam. You may also ask about these during the exam. You are not expected to memorize conversion between units.

Types of Questions:

- The exam will consist of two parts, each carrying approximately equal weight. The first part will be multiple choice, and the 2nd part will be short answer.
- I might ask you to remember facts from lecture or the reading, to use and interpret the key equations.

Summary of Assigned Reading: Available on the course web site.

Study Guide:

1) Make sure you can do and understand each homework problem. (The exam will emphasize material related to the homework problems.) *Note, HW problems 8.1 and 8.2 cover topics already discussed in previous weeks. These topics may appear on Midterm II.*

2) Make sure you have done all the assigned reading (posted on the front of the web page), and reviewed your lecture notes. *You are not expected to remember details from the reading that do not relate to topics covered in class or on the homework. Focus on the parts of the reading that are related to topics on the homework or lectures.*

3) “inflation” will not appear on MTII (it will appear on the final).

4) Important equations to understand:

- All equations mentioned on the MT-I review sheet. (The exam will focus on material not examined on MT-I, but you still will be expected to use the earlier concepts and equations.)
- Newton’s 2nd law.
- Newton’s law of gravitational force
- Newton’s version of Kepler’s 3rd law
- Formula relating orbital speed and mass contained within the orbit (for circular motion)
- *Formula for escape velocity (REMOVED Feb 28, will be tested on final, not MT2)*
- Formula for kinetic energy

Regarding the equations: Be prepared for questions like:

If the wavelength of a photon doubles, the Energy

- a) Doubles
- b) Increases by 4
- c) drops to half the original value
- d) goes to zero

(answer: c)

Such questions require you to use the equations, but do not require the use of a calculator (but you may use one anyway if you like).