

QUESTIONS FOR REVIEW AND STUDY:

You need to test your own knowledge as the course proceeds – before coming to an exam.

- The questions for review at the end of chapters are excellent ways to check your understanding of the concepts.
- Reading a question, *and simply deciding that you know the answer*, doesn't really work to prepare you for an examination.
- The best learning technique is to practice and judge your knowledge. *Write an answer to a review question, or say the answer out loud to someone.*
- When you articulate an answer, even alone in a room, you can "hear" yourself thinking. Expressing your self in writing or aloud allows you the possibility of judging your own presentation of your knowledge.
- Answer questions with others, but do it so that each participant states a complete answer to some question. Others should listen carefully and comment constructively. Take turns. This procedure allows others to contribute what they know, making your knowledge richer.

Everyone makes mistakes. Making a mistake and getting feedback is nearly the only way to learn anything. The "trick" to successful advancement is to make as many reasoned mistakes as you can outside of testing situations, so you can modify ideas and have time to integrate them into a coherent picture.

- Instructors cannot grade you directly on your internal state of knowledge. They grade you on the accurate and articulate *expression or performance* of that knowledge.
- *Work with your colleagues in developing an articulate expression of your knowledge.* Work in groups to study, so you have someone to who might answer your questions, and be someone who can practice their knowledge by answering their questions.
- This process makes a higher grade much more likely.

Hour–exams in PHSC 112 may consist of two kinds of questions:*

(*Style of exam subject to change with one–week's notice.)

- a) You will be asked multiple choice questions, about 20 to 25.
- b) You will be asked a question that requires an "essay–like" answer, generally two or three paragraphs with a drawing. *A list of about 5 to 6 of these questions will be given out in advance of the exam.* Not everyone in a class will necessarily get the same question. *These are usually worth about 10 times more than any single multiple–choice question.*

The criteria to keep in mind in judging your own answers is that they must be accurate, in complete sentences, and accessible and understandable if read by a bright high–school senior. *These are the important criteria we will use in grading.*

Assignments And Examinations

(*Subject to change at a moment's notice, except exams: at least 1-week's notice of change.)

#1: Assigned, Week of Jan. 24

<p>Preparation:</p>	<p>SCAN THROUGH MATERIALS. Note the Take-Home Exp. section.</p> <p>READING: Introduction, pages 1-15; Chapter 1; Prepare* questions 1-15. Chapter 2; Prepare questions 1-4.</p> <p>* "Prepare" means to read the chapter, then formulate satisfactory answers to the questions by yourself, or in discussion with others, or both. Thinking about them now means you will not be surprised by their appearance on an exam. These questions can be asked on any quizzes or exams, but will not be handed in or be accepted for grading. They are part of the process of understanding the material in the course.</p>										
<p>Due: 2nd class of 2nd week (Feb. 3)</p>	<p>THExp #1: (See the sheets at back of text.) Naked-Eye Observ. of Stars. Hand in only the pages requested. Nothing else!</p> <ol style="list-style-type: none"> 1. Hand in the Data Sheet. <i>Partners' names, if any, are required.</i> 2. One diagram with the 3 separate sightings; data tables may be on this sheet if there is room, or on a separate sheet. 										
<p>THExp.#3 & #4A: Begin today, the first day of classes. These observations need to be spaced out over an entire month to see all the phases.</p>	<p>MOON EXPERIMENTS START NOW!</p> <p><i>THExp #3 & #4A:</i> Naked-Eye Observations of the Moon. THE#3 asks for at least <i>one month's observations</i> of phases of the Moon. THE#4A asks you to sketch or draw the shapes of the shadowy areas seen on the lighted portion of the face of the Moon.</p>										
<p>THExp.#4A Due Th. Feb. 24</p>	<p>This takes over one month to complete. START NOW ON BOTH!</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">Third Quarter</td> <td style="padding: 2px 10px;">New</td> <td style="padding: 2px 10px;">First Quarter</td> <td style="padding: 2px 10px;">Full</td> <td style="padding: 2px 10px;">Third Quarter</td> </tr> <tr> <td style="padding: 2px 10px;">Feb. 1</td> <td style="padding: 2px 10px;">Feb. 8</td> <td style="padding: 2px 10px;">Feb. 15</td> <td style="padding: 2px 10px;">Feb. 23</td> <td style="padding: 2px 10px;">March 3</td> </tr> </table> <p>The Sept. Full Moon date is Tues. Feb. 15. During the first week of class, the moon should be clearly visible for most of the night.</p> <p><i>Even though you may not yet understand WHY you are seeing what you see, you can begin to record each sighting with a drawing and data table—DATE, TIME, PHASE, AND A DRAWING OF WHAT YOU SEE—as described in THE #3. The required geometric overview drawing can then be put on hold, until it's construction is further described in class.</i></p>	Third Quarter	New	First Quarter	Full	Third Quarter	Feb. 1	Feb. 8	Feb. 15	Feb. 23	March 3
Third Quarter		New	First Quarter	Full	Third Quarter						
Feb. 1	Feb. 8	Feb. 15	Feb. 23	March 3							
<p>THExp.#3 Due Th. Feb. 24</p>											
	<p>The Moon is in the visible sky for 10-12 hrs, night or day. Moonrise/set times can be found on the weather page of all newspapers.</p>										

#2: Assigned, Week of Jan. 31

<p>Preparation:</p>	<p>READING: Chapter 2: Questions 4, 5, 6, 7, 10 Chapter 3 is an overview of the universe; we will spend a brief in-class time getting a sense of sizes, distances, and looking at some recent photos, but mostly you are expected to read this chapter yourself and know the answers to Questions 1-5.</p> <p>(Many of the answers to questions at the back of Chapters are brief and definitional. Be able to state a relatively brief coherent answer in complete sentences. Practice on each other by asking the questions of each other.)</p>
<p>Due NOW, Feb. 3</p>	<p>DUE NOW: THExp #1: Naked-Eye Observations Stars and Planets.</p>

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#3: Assigned, Week of Feb. 7

Preparation: READING: Chapter 4; Questions 1–15. Chapter 5; Questions 1–14

(Most of these are aimed to help you get practice with the geometric overview drawings required in THExp#3.) Look up; be aware of the Moon: the newspaper's weather page will tell you when the Moon rises AND when it sets.

#4: Assigned, Week of Feb. 14

Preparation: **Read** Chapter 6. Q1 through 6; Chapter 7. This is a very brief but important chapter that sets the context for what follows.
Chapter 8: Q 1 through 8, 11, 12.

#5: Assigned, Week of Feb. 21

Preparation: Chapter 8: cont.
Chapter 9: Q1 through 9

THExp.#3	DUE DUE NOW: Feb. 24
THExp. #4A	DUE

#6: Assigned, Week of Feb. 28

Preparation Chapter 9 (cont.)

#7: Assigned, Week of Mar. 7 **EXAM I March 10**

Preparation:	EXAM REVIEW, 1 st class of week
EXAM #1	EXAM #1, 2nd class of week

#8: Assigned, Week of Mar. 14

Preparation: Chapter 10: Q1 through 12

Autumn Equinox: DO THEXP #2 at 12pm on Sunday, March 20.

#9: Assigned, Week of Mar. 28

Preparation: Chapter 11 Q1 through 9
Chapter 12 Q1 through 14

THExp #2	DUE DUE NOW: March 31
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#10: Assigned, Week of April 4

Preparation: Chapter 13: . Q1 through 10
Chap 14. Summary, What's next?

THExp. #5A:	Due NOW, April 7
Try this over the weekend. Due, next week:	THExp #6 The Interaction of Electric Charges

Assignments And Examinations

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#11: Assigned, Week of April 11

Preparation: Chapter 15: Waves. Q1 through 12. Many important wave concepts are covered in the laboratory, and may be on an exam.

THExp #6 Due NOW, April 14

#12: Assigned, Week of April 18 **EXAM II on April 21**

Preparation: EXAM REVIEW, 1st class
EXAM #2, **2nd class of week**

#13: Assigned, Week of April 25

Preparation: Chapter 16: Q1 through 7; Chapter 17: Q1-3

#14: Assigned Week of May 2

Preparation: Chapter 17: cont.

#15: Assigned, Week of May 9

Preparation: Chapter 18: Q1 through 5

THExp #7A: Due now, May 12

#16: **FINAL EXAM Thursday, May. 19, 8:00 AM-10:00 AM**