Astronomy 101: Second Midterm Exam Guide
Fall 2008, San Diego State University, 2008.11.13, Prof. Leonard

As indicated in the Course Syllabus, the second midterm exam will be taken in class on Thursday, November 20. The examination will commence at the start of class, and you will have the full class period (1 hour, 15 minutes) to work on it. It will consist of 50 multiple choice questions.

Please see pages 225 → 228 of your Course Reader for a complete exam study guide (p. 226 – 227) and exam instructions (p. 225 & 228). A set of sample exam questions is found on p. 230, as well. The exam protocol will be exactly the same as that followed for the first midterm, as indicated on p. 225 & 228 of the Course Reader: e.g., wait outside the exam room until told to enter as a seating chart will be in effect, and be sure to bring a ParSCORE FORM No. F-289 -PAR-L scantron form, a pencil, and one official “exam cheat-sheet” with anything you want written inside the box to the exam. This handout will not repeat all of the general information given in the Reader, but will instead focus on the specific material relevant to this particular exam.

What Should I Study?

Put simply, your second midterm exam explicitly covers all of the information presented since the end of the material covered by your first midterm exam; specifically, it covers the material assigned and described in Weekly Handouts 6, 7, 8, 9, 10, and 11.

One note about the cumulative nature of knowledge gained as this course progresses: While this exam does not explicitly test material that was covered by the first midterm exam (e.g., it will not contain any questions specifically related to the celestial sphere, retrograde motion, Claudius Ptolemy, etc.), some of the topics presented during weeks 6 → 11 do, by necessity, rely on understanding of material presented earlier (e.g., to understand why pulsars are born spinning so rapidly – a concept presented in week 10 – you must first understand what “conservation of angular momentum” is, which was discussed in week 4). In this subtle way, then, the exam is cumulative, although every effort is made to only directly test the later material.

The material that you will want to review for this second midterm, then, is as follows:

1. Textbook:
   - Chapter 4: Entire chapter except sections 4.1.4, 4.4.1, and 4.4.2, which were covered explicitly by your first midterm exam.
   - Chapter 6: Section 6.1.1, 6.1.2 (partial – see Week 8 handout).
   - Chapter 7: Sections 7.1, 7.2, 7.3.1 → 7.3.3, 7.4.2.
   - Chapter 8: Sections 8.4.3 and 8.4.4.
   - Chapter 9: Sections 9.2.1, 9.2.2 and 9.4.4.
   - Chapter 12: Sections 12.4.1 and 12.4.2.
   - Chapter 13: Sections 13.4.3, 13.4.4, 13.5.1 and 13.5.3.
   - Chapter 14: Sections 14.1.1 → 14.1.4, 14.2, 14.3.1, 14.4 and 14.5.
   - Chapter 15: Sections 15.1.1 (including introductions to both chapter and section), 15.5.1, 15.5.2, 15.5.3, 15.6.

2. Course Reader readings:
   - Pages 191– 209: This includes the assigned reading on Light Waves, Putting Your Knowledge of Light to Use, Nuclear Interactions, and The Birth and Life of Stars.

3. Selected Powerpoint Slides:
   - Slide numbers 138 → 291, on pages 70 → 128 of the Course Reader.
4. **Key Concepts, Terms, People and Ideas:**
   All terms from “Speed of Light” through “Principle of Equivalence” that are listed on pages 15 through 17 of the *Course Syllabus* handout that was given out on the first day of class (also included in your Reader).

5. **Weekly Reading Assignments** 6, 7, 8, 9, 10, and 11.

6. **On-line reading quizzes:** “Week7_quiz”, “Week8_quiz”, “Week9_quiz”, and “Week10_quiz”. Full solutions to all four quizzes\(^1\) are available at the textbook web-site or from the course homepage.

   **Where Can I go for Help?**

   Assistance is available before the exam through:

   - *My office hours*: Friday, November 14, from 2:30 PM – 4:30 PM.
   - *TA help room hours* (Rm. 215, physics-astronomy building):
     - Monday: 12 – 2 PM; 5 – 6 PM
     - Tuesday: 12 – 2 PM
     - Wednesday: 12 – 2 PM
     - Thursday: 12 – 2 PM; 5 – 6 PM
     - Friday: 10 AM – 1 PM; 2 - 3 PM
     → Meeting with *any* of the teaching associates will be helpful. Note, though, that the two teaching associates who are specifically associated with your section of Astronomy 101 are in the Astronomy Help Room at the following times:
     - Alex Burke: Tuesday 1 – 2 PM and Friday 2 – 3 PM
     - Tina Güth: Monday 12 – 1 PM and Friday 11 AM – 12 PM
     Since Alex and Tina are part of your course (and will have attended the lectures), they will likely be able to provide more specific guidance than the other teaching associates, so definitely seek them out. But, you are of course encouraged to go to the Help Room whenever it is convenient for you!
   - *Last-minute question-and-answer session*. On Wednesday, November 19 (the day before the midterm), an extra help session will be held in Rm. 216 of the physics-astronomy building from 2:30 – 4:00 PM. I will be there to answer any questions that you may have; note that this is NOT a formal “review session”; no additional information about the exam or its contents will be given (since attendance is optional and not all students can make it). Rather, it is provided solely as last-minute help to answer any questions that may have cropped up during your studying.

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\(^1\)Solutions to “Week10_quiz” will be available beginning at 12:05 AM, Wednesday November 19, on the textbook website.