ASTRO 25 – COURSE UNITS, TEST DATES, STUDY GUIDES

Important Note: All test dates are tentative. However, any changes to these dates will be announced in class at least one week in advance. Notices usually will also appear on the web page under the “Important Announcements” section.

Unit 1 info – Universe Overview, Scale Models, Motions

Test 1: week 4 (March 9-13). For twice a week classes, TTh: Tuesday, MW: Wednesday

Study Guide handed out separately

Unit 2 info & study guide - Science & Scientific Method, Kepler's Laws, Motion, Weightlessness, Newton’s 3rd Law (actions-reactions)

Test 2: week 6 (March 23-27). For twice a week classes, TTh: Tuesday. MW: Wednesday

Chapter 3 – Science & Scientific Method
  Short answer: 1, 13, 14, 15.
  Test understanding: (unusual format for these questions) 18, 20, 21, 22, 23, 24, 25, 26.
  Quick Quiz: 34, 35, 36.
  Process of Science: 40 (worth thinking about, but not on your test)
  Think about it pages 84.
  See for Yourself, page 86.

Chapter 3 – Kepler’s laws
  Short answer: 12
  Quick Quiz: 29, 30, 31, 32, 33
  Think about it pages: 74
  Lecture Tutorials: Kepler’s 2nd law (pp. 21-24), Kepler’s 3rd law (pp. 25-27)
  Ranking Tasks: Kepler’s Laws 1, 2, 3, 5 (skip #4)

Chapter 4 – Motion, Weightlessness, Newton’s 3rd Law of Motion (Actions-Reactions)
  Short answer: 1, 2, 4
  Test understanding: 19, 20
  Quick Quiz: 29, 30, 31, 33
  Common Misconceptions pages 128

Don’t forget to make a 3x5 handwritten notecard for the test

Unit 3 info & study guide – Rest of Newton’s Laws, Some Aspects of Light

Test 3: week 8 (Apr 6-10). For twice a week classes, TTh: Thursday. MW: Wednesday

Chapter 4 – Gravity and Newton’s first two laws
  Short answer: 5, 11, 13, 18
  Test understanding: 21, 22, 23
  Quick Quiz: 32, 36, 37
  See for yourself page: 122
  Think about it page: 124, 134

(continued on back)
Common Misconceptions pages 125
Lecture Tutorials: Newton’s Laws & Gravity (pages 29-31)
Ranking Tasks: Gravity (all of those handed out)

Chapter 5 – Aspects of Light, sections 5.1, 5.2, “How is energy stored in atoms” part of section 5.3 (pages 162-163), up to (but not including) “How does light tell us the temperature of planets and stars” in section 5.4 (pages 163-167)
   Short answer: 2, 3, 4, 5, 6, 7, 12, 15,
   Test understanding: 19, 20, 21, 22, 26,
   Quick Quiz: 29, 30, 31, 36
   Process of Science: 39
   Investigate Further: 44 (use figure 5.12 on page 163)
   Think about it page: 155, 163, 165
   Common Misconceptions pages 157 (both), 158
   Lecture Tutorials: Electromagnetic Spectrum of Light (pages 45-48), Light and Atoms (pp. 63-68)

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Spring Break: April 13-17

Unit 4 info & study guide –Rest of Light, Telescopes

Test 4: week 11 (May 4-8). For twice a week classes, TTh: Thursday. MW: Wednesday
Chapter 5 – Continuous spectra, Doppler Effect
   Short answer: 2, 14, 16, 17, 18
   Test understanding: 24, 25, 27, 28
   Quick Quiz: 35, 37, 38
   Investigate Further: 45
   See for yourself page: 168
   Think about it page: 172
   Lecture Tutorials: Luminosity, Temperature, and Size (pp. 53-56), Blackbody Radiation (pp. 57-60), Types of Spectra (pp. 61-62), Analyzing Spectra (pp. 69-72), Doppler Shift (pp. 73-78)
   Ranking Tasks: Blackbody Luminosity (all 5), Doppler Shift (activities 1-3, skip 4)

Chapter 6 – Telescopes. SKIP pages 187, 188, and the first two lines of 189)
   Short answer: 2, 3, 4, 7, 8, 9, 10, 12
   Test understanding: 14, 16, 17, 19, 20, 21, 22
   Quick Quiz: 23, 25, 26, 27, 28, 29, 30, 31, 32
   Common Misconceptions pages 184, 193, 196
   See for yourself page: 182, 183, 193
   Lecture Tutorials: Telescopes and Earth’s Atmosphere(pages 49-52),

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Units 5 and 6 will be given out later.