

Test One Preview

AST 101 Solar System

General study advice:

- 1) Use the blue course outline as your guide.
- 2) Then, study your notes.
- 3) Then, go over your written assignments, including the new terms.
- 4) Finally, as much as time permits, go over your reading assignments.

For the early history, Unit II (blue Course Outline), know the following:

- reasons why astronomy is the oldest science, that is, what were its impetuses
- in what ways the Greeks took science beyond what anyone else ever did
- what Eratosthenes and Hipparchus did (See textbook.)
- Aristotle's reasons for the geocentric model
- Aristotle's approach to doing science and how it relates to current-day pseudoscience
- reasons for the demise of the Greeks, science in especially
- Arabic/Islamic contribution

This test covers one of the very most important revolutions in history—the Scientific Revolution. It is covered in Unit III. The central sciences of the Scientific Revolution were the closely related astronomy and physics. The Scientific Revolution was covered in a straightforward way, with the key players and their work presented. So just make sure you know what each of them did that was noteworthy. And of course, with Galileo, you should also know about his clash with the Roman Catholic Church and the lessons we learned from that clash and advances to science he contributed.

There are some possibilities for math problems on this test, specifically, dealing with Kepler's 3rd Law of planetary motion and Newton's Law of Gravity. The numbers used regarding the gravity formula will be simple enough that you should not need a calculator (but you may still use one during the test). You just need to know what to do with the numbers!

Complete understanding of the three motion laws was not given, but I do expect you are comfortable with the concepts of inertia (First Law) and force (Second Law). That means, some basic question or two may be asked about them.

See that section "B" in Unit IV? Past experience has shown that students space out, as it were, the observational/experimental proofs of earth's motions in space that we learned following the scientific revolution. Earlier, I wanted you to understand Aristotle's reasons for favoring the geocentric model, but it would not do if graduates of my courses do not understand why scientists have left the geocentric model behind. Kepler and Galileo's work was impressive, but not conclusive, for the reason that they did not prove that earth, itself, is a moving planet.

The Historical Supplement Note Set ("The Scientific Revolution and Western Civilization"):

Several questions here, all are from the question sheets of Assignment 5. I'll especially include how scientific thinking is apparent in US Constitution.

Also note some of the contributions to the world by Western Civilization. These are listed in Unit IV of the Historical Supplement Note Set.

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