FOCUS: All TopHat Lectures from 8/30 through 10/6

The test will be mostly multiple choice, true/false, matching and fill in the blank.

HELPFUL STUDY TOPICS (this is NOT a comprehensive list):

Know the names of the major historical figures (the Ancient Chinese and Greek astronomers through Galileo, Huygens, Kepler, Tycho, and Newton) and what they discovered.

Be able to draw the major stars of the constellation Orion and name them.

Know the names of the astronauts on the Apollo 11 mission. What year did they land on the Moon? Where did they land? Knowing the names of other Apollo astronauts is a plus.

Know the basic terminology related to describing locations of objects on Earth (eg. Latitude and Longitude, equator, prime meridian), in the sky relative to Earth (eg. meridian, azimuth, altitude, zenith, nadir), and in space (ecliptic, vernal equinox, autumnal equinox, right ascension, and declination).

Understand why we have seasons.
Understand why we have tides.

Know what the Moon is like… and why.
How strong is the gravity? Does it have an atmosphere? What do the mountains look like? What does the sky look like?
How hot does it get? How cold?
Know the basic geologic features: impact craters, regolith, rilles, mare, highlands.
Know the basic features of an impact crater: central peak, crater rim, ejecta, crater floor.

Locate the following features on the Moon: Sea of Tranquility, Tycho, Copernicus, Kepler

Know Kepler’s Laws
Know the terminology: ellipse, focus, semi-major axis, period
You may be required to do some straightforward calculations to find the period of a planet given its semi-major axis or find the semi-major axis given the period.

Know about Newton’s Law of Gravitation. What happens if you double the distance between bodies, etc.

How do the planets orbit?
What planets exist in our solar system?
How do the motions of the planets and our moon affect their appearance in the sky?
How does their distance from the sun affect their orbital period.

Know about units of measure.
How fast does light travel?
How far is a light-year?