NO NOTES are allowed. You need to bring a working red flashlight and your Planisphere to the exam.
The most effective way to study for the multiple-choice part of the midterm is to review all of the quizzes.

• Working definitions of the following terms:
  Altitude, Azimuth, Right Ascension, Declination, Ecliptic, Zodiac, Meridian, Transit,
  Midday, Local (Apparent) Solar Noon, Sidereal Time, Zenith, North Celestial Pole,
  Celestial Equator

• Convert from local time to Eastern Time for East Lansing

• Sun’s RA and Dec for each of the equinoxes and solstices

• Approximate RA of Sun for any month interval

• Correspondence of rising and setting points for celestial objects
  e.g., given a rising point, predict setting point.

• Approximate rising point, setting point, midday altitude of sun at equinoxes and solstices for
  East Lansing.

• Where to generally find planets and moon.

• Given two of the following three quantities be able to find the third: Sidereal Time, Local Solar
  Time, RA of the sun.

PLANISPHERE  Using your Planisphere, be able to determine:

• Rising and setting positions of celestial bodies to nearest 16\textsuperscript{th} of circle
  e.g., N, NNE, NE, ENE, E, etc.

• Local times of rising, setting, transiting of bodies throughout the year

• Approximate midday altitude of celestial bodies
  e.g., high, low, midway up

• Length of time object is above horizon

• Sun’s location (and constellation) on Planisphere at the equinoxes

• Sun’s rising or setting time at the equinoxes.

ASTROLABE  Be able to answer the questions from Quiz 5, from The Personal Astrolabe booklet

• Which ancient culture is given credit for the origins of the astrolabe?

• The oldest existing astrolabes are from what civilization and what century?

• Give one reason that made the astrolabe particularly valuable to the Islamic culture.

• When and how was the astrolabe reintroduced into Europe?

• In 1391 Geoffrey Chaucer wrote a treatise on the astrolabe for whom?

• Give one reason that the astrolabe was/is useful for astrology?