Worksheet: Actual Motions I

1. On the Earth, a freely swinging pendulum gradually shows a change in the direction of its swing. This change is evidence that the Earth
   a. is an orbiting natural satellite
   b. revolves around the Sun
   c. rotates on its axis
   d. has an elliptical orbit

2. The orbiting motion of the Earth is best described as
   a. inclination
   b. revolution
   c. rotation
   d. declination

3. The day of the year, as units of time, are based upon motions of
   a. the Moon
   b. the Earth
   c. the Sun
   d. the Stars

4. Which is the best evidence for the Earth’s rotation?
   a. the rising of the Sun
   b. the motion of a Foucault pendulum
   c. the changing of the seasons
   d. the phases of the Moon

5. The Coriolis effect provides evidence that the Earth
   a. revolves around the Sun
   b. rotates on its axis
   c. has a magnetic field

6. The predictable changes in the direction of swing of a Foucault pendulum would be influenced most by a change in the Earth’s
   a. angle of tilt
   b. intensity of insolation
   c. rate of rotation
   d. period of revolution

7. In New York State, which day has an equal period of daylight and nighttime?
   a. December 21
   b. March 21
   c. June 21
   d. none of the above
8. Which planetary model allows a scientist to predict the exact positions of the planets in the night sky over many years?
   a. The planets' orbits are circles in a heliocentric model.
   b. The planets' orbits are ellipses in a geocentric model.
   c. The planets' orbits are ellipses in a heliocentric model.
   d. The planets' orbits are circles in a geocentric model.

9. In New York State, which day has the shortest period of daylight?
   a. December 21
   b. March 21
   c. September 21
   d. June 21

10. Which statement best explains the apparent daily motion of the stars around Polaris?
    a. The Earth revolves around the Sun.
    b. The Earth has the shape of an oblate spheroid.
    c. The Earth rotates on its axis.
    d. The Earth's orbit is an ellipse.