EPS 200 (Stapleton) Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Earth Moon Sun -- More test review questions

Be able to answer any of the questions or satisfy any of the requests below

1. Draw a diagram showing the Earth, the Sun, and the positions of all eight moon phases. The viewpoint should be looking down on the Earth’s North Pole.

a. Label locations on the Earth’s equator with accurate times of day (use 3, 6, 9, and 12, AM & PM)

b. What is the name of each moon phase?

c. What would each moon look like to an observer on Earth?

d. At what approximate time does each moon rise and set, and when is each at its zenith (highest point in the sky)?

e. Which moon phases coincide with solar and lunar eclipses?

f. Use arrows to show the directions of rotation and revolution of all of the objects in the diagram.

g. Label your diagram to show how long it takes the moon to move from one phase to another. You should be able to tell the approximate number of weeks between any two moon phases.

h. Which moon phases cause spring tides? Which moon phases cause neap tides?

2. How should a watch be adjusted when one crosses into a new time zone heading eastward? How about when one is heading westward?

3. How should a watch and calendar be adjusted when one crosses the international dateline heading eastward? What if one is heading westward?

4. Where is the international dateline?

5. What is the purpose of time zones?

6. What motion (rotation or revolution) of what body (Earth, Moon, or Sun) causes…

a. Daily tidal changes

b. Rising and setting of the sun

c. Rising and setting of the moon

d. Changes in seasons

e. Changes in moon phase

7. Draw a diagram showing the Earth and sun in their relative positions and correct tilt during…

a. Winter

b. Summer

c. Shade the Earths appropriately

d. Label the parts of the Earth where the time is currently 12AM, 3AM, 6AM, 9AM, 12PM, 3PM, 6PM, and 9PM

8. Seasons change due to the axial tilt and revolution of the Earth. Why do revolution and axial tilt make our summers hotter than our winters? Give two reasons.

9. Draw a diagram showing the Earth, the moon, and the locations of high and low tides on the Earth.

10. During what month are we closest to the sun?