

# Planetary Astronomy. Moon and Mercury

Name: \_\_\_\_\_

1. Craters with terraced walls will also
  - (a) be the oldest craters
  - (b) be the youngest craters
  - (c) have a central uplift
  - (d) have bright rays
  - (e) have a flat, dark basin
2. Which theory is favored by scientists for the formation of the Moon?
  - (a) the coformation, or sister theory
  - (b) the capture theory
  - (c) the fission, or daughter theory
  - (d) the impact theory
3. The most important factor in explaining the lack of atmosphere on Mercury is
  - (a) its scarps
  - (b) its composition
  - (c) its small radius
  - (c) the high peak surface temperatures
  - (d) the presence of an exosphere
  - (e) the spin-orbit resonance
4. T or F. The larger the escape speed from a planet's surface, the less likely that planet can hold an atmosphere.
5. T or F. Although the Moon appears to be a symmetric sphere its interior has an asymmetric density distribution.
6. T or F. Rocks as old as 4.6 billion years were recovered from the Moon's surface.
7. T or F. The maria on the Moon have a lower albedo than the lunar highlands.
8. T or F. the average albedo on Mercury is lower than that of the Moon.
9. How many times does Mercury rotate relative to the Sun during the time it takes to revolve twice around the Sun?
  - (a) 0.5
  - (b) 1
  - (c) 1.5
  - (d) 2
  - (e) 3

10. How many times does Mercury rotate relative to the stars during the time it takes to revolve twice around the Sun?
- (a) 0.5      (b) 1      (c) 1.5      (d) 2      (e) 3
11. T or F Mercury's weak magnetic field is consistent with its nearly complete lack of the element iron.
12. T or F The abundance of atoms of Ca, Mg, and Na are near the surface of Mercury are seasonal.
13. T or F. Messenger was crashed onto the surface of Mercury.
14. (2pts) Which of these features are associated with Mercury, more than the Moon. (Circle all that apply.)
- (a) scarps      (b) craters      (c) wierd, jumbled terrain opposite a basin  
(d) hollows      (e) rilles

**EXTRA** How long does it take for the Moon to rotate once relative to the Sun? (Show 3 significant figures.) \_\_\_\_\_.