

M O D E R N E A R T H S C I E N C E

Chapter 30

Moons and Rings**Review**

Choose the best response. Write the letter of that choice in the space provided.

- _____ 1. Dark areas on the moon that are smooth and reflect little light are called
a. rilles. b. maria. c. rays. d. breccia.
- _____ 2. Most of the information astronomers have gathered about the interior of the moon has come from
a. telescopes. b. satellites. c. spectrographs. d. seismographs.
- _____ 3. Soon after the moon formed, it was covered with
a. water. b. anorthosites. c. frozen hydrogen. d. molten rock.
- _____ 4. In the most recent stage in the development of the moon,
a. the densest material sank to the core.
b. the crust began to break.
c. the earth's gravity captured the moon.
d. the number of meteoroids hitting the moon decreased.
- _____ 5. The moon is closest to the earth at
a. new moon. b. full moon. c. perigee. d. apogee.
- _____ 6. During each orbit around the earth, the moon spins on its axis
a. 1 time. b. about 27 times. c. about 29 times. d. 365 times.
- _____ 7. In a lunar eclipse, the moon
a. casts a shadow on the earth. b. is in the earth's shadow.
c. is between the earth and the sun. d. blocks part of the sun from view.
- _____ 8. When the size of the visible portion of the moon is decreasing, the moon is
a. full. b. annular. c. waxing. d. waning.
- _____ 9. In the crescent phases, the entire moon shines dimly because of
a. light produced by the earth.
b. sunlight reflected off the earth.
c. hydrogen fusion in the core of the moon.
d. energy produced by the rotation of the moon.

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Choose the best response. Write the letter of that choice in the space provided.

_____ **10.** The two moons of Mars are

- a. Io and Europa.
- b. Titan and Charon.
- c. Phobos and Deimos.
- d. Triton and Nereid.

_____ **11.** Compared with the other moons of Jupiter, the four Galilean moons are

- a. larger.
- b. farther from Jupiter.
- c. denser.
- d. younger.

_____ **12.** The rings of Saturn are probably composed of

- a. regolith.
- b. small pieces of black rock.
- c. several hundred small moons.
- d. billions of pieces of ice and rock.

Critical Thinking

Read each question or statement and answer it in the space provided.

1. How would the craters on the moon be different today if the moon had developed an atmosphere that had wind and contained water?

2. If meteoroids had stopped hitting the moon before the outer surface of the moon cooled, why would the maria not have developed?

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Read each question or statement and answer it in the space provided.

3. Suppose that the moon spun twice on its axis during each orbit around the earth. How would study of the moon from the earth be easier?

4. Venus does not cause a solar eclipse even though it passes between the earth and the sun. Instead, it appears as a black dot moving across the face of sun. Explain why this happens.

5. Would a satellite orbiting the earth go through phases like those of the moon? Explain your answer.

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Application

Read each question or statement and answer it in the space provided.

- 1. Your friend who just got a new telescope wants to look at Venus during its fullest phase. Explain why that is impossible.

- 2. Imagine a planet that orbits the sun in 100 days and has one moon. The moon goes through a complete set of phases in 20 days. On this planet, how many months would one year have?

- 3. Using any of the new terms listed on page 634 of your textbook, construct a **concept map** starting with the term “Time.” See how many terms you can include.

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