**Pg. 685-687 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Section: Formation of the Solar System**

1. The sun and all of the planets and other bodies that revolve around it make up the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

2. Any primary body that orbits the sun, or a similar body that orbits another star, is called a(n)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

3. In 1796, the French mathematician Pierre-Simon, marquis de Laplace, advanced the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to explain the origins of the solar system.

THE NEBULAR HYPOTHESIS

\_\_\_\_\_\_ 4. Laplace’s hypothesis states that the sun and the planets condensed at

about the same time out of a rotating cloud of dust and gas called a

a. planet. b. nebula.

c. supernova. d. solar system.

\_\_\_\_\_\_ 5. The rotating cloud of dust and gas from which our solar system is thought to have formed is called the

a. solar nebula. b. gas giant. c. sun. d. nova

\_\_\_\_\_\_ 6. Energy from collisions and pressure from gravity caused the center of

the solar nebula to become

a. hotter and less dense. b. cooler and denser.

c. cooler and less dense. d. hotter and denser.

\_\_\_\_\_\_ 7. Which of the following formed when the temperature at the center of the nebula reached about 10,000,000°C and hydrogen fusion began?

a. Mars b. Earth c. the sun d. the moon

8. How much of the matter that was contained in the solar nebula makes up the sun?

a. 5% b. about 99% c. 25% d. about 75%

**FORMATION OF THE PLANETS**

\_\_\_\_\_\_ 9. Small bodies from which a planet originated in the early development of the solar system are called a. atmospheres. b. planetesimals. c. suns. d. moons.

\_\_\_\_\_\_ 10. Some planetesimals joined together through collision and through the force of gravity to form larger bodies called

a. protoplanets. b. sunspots. c. protons. d. nebulas.

\_\_\_\_\_\_ 11. The smaller bodies that orbit the planets are called

a. solar nebulas. b. moons. c. planetesimals. d. suns.

12. Why are Mercury, Venus, Earth, and Mars called the inner planets?

13. Why did the inner planets, which contained large percentages of heavy elements such as iron and nickel, lose their less dense gases?

14. How do the surfaces of the inner planets compare with that of Earth today?

15. How do the inner planets differ from the outer planets?

16. Jupiter, Saturn, Uranus, and Neptune are referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_planets.

17. How did distance from the sun affect the formation of the outer planets?

18. Name the three reasons why the outer planets are referred to as gas giants.

19. Which outer planet is farthest from the sun?

20. In what way does Pluto differ from the other outer planets?

21. In what way is Pluto similar to the other outer planets?

22. Why do many scientists believe that Pluto should not be classified as a major planet?

Discuss the following concepts:

1. Describe the nebular hypothesis.
2. Explain how planetesimals differ from protoplanets.
3. Describe how planets develop
4. Describe why the outer planets are more gaseous than the inner planets.