

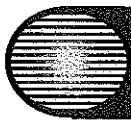
**Chapter  
Test****The Solar System****I. Testing Concepts**

**Directions:** For each of the following, write the letter of the term or phrase that best completes the sentence.

- \_\_\_\_\_ 1. The planet with the lowest density and hundreds of thin rings is \_\_\_\_\_.  
a. Jupiter                      b. Uranus                      c. Saturn                      d. Neptune
- \_\_\_\_\_ 2. Johannes Kepler discovered that the orbits of planets are \_\_\_\_\_.  
a. parabolic                      b. circular                      c. elliptical                      d. spherical
- \_\_\_\_\_ 3. A planet that is very hot and has sulfuric acid in its clouds is \_\_\_\_\_.  
a. Mars                      b. Venus                      c. Mercury                      d. Earth
- \_\_\_\_\_ 4. The closest moon to Jupiter, \_\_\_\_\_, is volcanically active.  
a. Io                      b. Callisto                      c. Ganymede                      d. Europa
- \_\_\_\_\_ 5. \_\_\_\_\_ axis of rotation is nearly parallel to the plane of its orbit.  
a. Mars's                      b. Uranus's                      c. Mercury's                      d. Earth's
- \_\_\_\_\_ 6. Two planets with similar mass and size are \_\_\_\_\_.  
a. Mercury and Jupiter                      c. Earth and Pluto  
b. Saturn and Uranus                      d. Venus and Earth
- \_\_\_\_\_ 7. The planet that averages 150 million km, or one AU, from the Sun is \_\_\_\_\_.  
a. Mars                      b. Jupiter                      c. Mercury                      d. Earth
- \_\_\_\_\_ 8. \_\_\_\_\_ is the largest moon in the solar system.  
a. Callisto                      b. Ganymede                      c. Earth's moon                      d. Io
- \_\_\_\_\_ 9. The largest known volcano in the solar system is an extinct volcano known as Olympus Mons found on the planet \_\_\_\_\_.  
a. Mars                      b. Jupiter                      c. Mercury                      d. Venus
- \_\_\_\_\_ 10. The second smallest planet and the one closest to the sun is \_\_\_\_\_.  
a. Mars                      b. Venus                      c. Mercury                      d. Jupiter
- \_\_\_\_\_ 11. A planet that appears reddish-yellow due to iron oxide in its rocks is \_\_\_\_\_.  
a. Mercury                      b. Jupiter                      c. Uranus                      d. Mars
- \_\_\_\_\_ 12. The largest of \_\_\_\_\_ moons, Titan, is larger than the planet Mercury.  
a. Neptune's                      b. Pluto's                      c. Uranus'                      d. Saturn's
- \_\_\_\_\_ 13. At times, the planet \_\_\_\_\_ is actually the farthest planet from the Sun.  
a. Uranus                      b. Saturn                      c. Neptune                      d. Jupiter
- \_\_\_\_\_ 14. The Great Red Spot, a continuous storm, is located on the planet \_\_\_\_\_.  
a. Saturn                      b. Uranus                      c. Jupiter                      d. Neptune
- \_\_\_\_\_ 15. Methane gives \_\_\_\_\_ their blue-green color.  
a. Mars and Earth                      c. Saturn and Jupiter  
b. Uranus and Neptune                      d. Neptune and Venus

**Chapter Test (continued)**

- \_\_\_\_\_ 16. The solid portion of a comet is called its \_\_\_\_\_.  
a. coma                      b. core                      c. heart                      d. nucleus
- \_\_\_\_\_ 17. A cloud of gases around the solid portion of a comet is known as the \_\_\_\_\_.  
a. coma                      b. core                      c. heart                      d. nucleus
- \_\_\_\_\_ 18. \_\_\_\_\_ are small pieces of rock moving through space.  
a. Comets                      b. Meteors                      c. Meteoroids                      d. Meteorites
- \_\_\_\_\_ 19. Two of the inner planets are \_\_\_\_\_.  
a. Mars and Jupiter                      c. Earth and Saturn  
b. Mercury and Mars                      d. Uranus and Neptune
- \_\_\_\_\_ 20. The planet least like its close neighbor is \_\_\_\_\_.  
a. Neptune                      b. Pluto                      c. Uranus                      d. Saturn
- \_\_\_\_\_ 21. \_\_\_\_\_ published the Sun-centered model of the solar system in 1543.  
a. Kepler                      b. Magellan                      c. Copernicus                      d. Galileo
- \_\_\_\_\_ 22. When small pieces of rock moving through space enter Earth's atmosphere and completely burn up, they are called \_\_\_\_\_.  
a. comets                      b. meteors                      c. meteorites                      d. asteroids
- \_\_\_\_\_ 23. Pieces of rock that actually strike Earth's surface are called \_\_\_\_\_.  
a. meteoroids                      b. comets                      c. meteors                      d. meteorites
- \_\_\_\_\_ 24. Most asteroids are located in an area between the orbits of \_\_\_\_\_.  
a. Earth and Mars                      c. Mars and Jupiter  
b. Jupiter and Saturn                      d. Mercury and Venus
- \_\_\_\_\_ 25. Scientists theorize that the asteroid belt did not form a planet because \_\_\_\_\_.  
a. Jupiter's gravity kept it from forming  
b. some of the particles were too large  
c. it was too rocky  
d. some of the particles moved too slowly

**Directed Reading for  
Content Mastery****Key Terms  
Stars and Galaxies**

**Directions:** Write the letter of the term that correctly completes each sentence in the space at the left.

- \_\_\_\_\_ 1. \_\_\_\_\_ is a measure of the amount of light a star actually gives off.  
a. Apparent magnitude                      b. Absolute magnitude
- \_\_\_\_\_ 2. A \_\_\_\_\_ is a large group of stars, gas, and dust held together by gravity.  
a. solar system                                b. galaxy
- \_\_\_\_\_ 3. The largest layer of the Sun's atmosphere is the \_\_\_\_\_.  
a. chromosphere                              b. corona
- \_\_\_\_\_ 4. Distances between stars and galaxies are measured in \_\_\_\_\_.  
a. light-years                                  b. millions of kilometers
- \_\_\_\_\_ 5. An object so dense that nothing can escape its gravity field is a \_\_\_\_\_.  
a. white dwarf                                 b. black hole
- \_\_\_\_\_ 6. A \_\_\_\_\_ is a group of stars that form a pattern in the sky.  
a. constellation                                b. flare
- \_\_\_\_\_ 7. A star beginning as a large cloud of gas and dust is called a \_\_\_\_\_.  
a. nebula                                        b. neptune
- \_\_\_\_\_ 8. The Milky Way is a(n) \_\_\_\_\_ galaxy.  
a. spiral                                         b. elliptical
- \_\_\_\_\_ 9. Areas of the Sun's surface that appear dark because they are cooler than surrounding areas are called \_\_\_\_\_.  
a. CMEs                                         b. sunspots
- \_\_\_\_\_ 10. The collapsed core of a supernova that contains only neutrons is a \_\_\_\_\_.  
a. neutron star                                 b. super giant


**Chapter  
Review**

# Stars and Galaxies

## Part A. Vocabulary Review

**Directions:** Match the terms in Column I with their descriptions in Column II. Write the letter of the correct description in the blank at the left.

### Column I

- \_\_\_\_\_ 1. white dwarf
- \_\_\_\_\_ 2. absolute magnitude
- \_\_\_\_\_ 3. apparent magnitude
- \_\_\_\_\_ 4. parallax
- \_\_\_\_\_ 5. constellations
- \_\_\_\_\_ 6. main sequence
- \_\_\_\_\_ 7. nebula
- \_\_\_\_\_ 8. giant
- \_\_\_\_\_ 9. light-year
- \_\_\_\_\_ 10. supergiant
- \_\_\_\_\_ 11. neutron star
- \_\_\_\_\_ 12. black hole
- \_\_\_\_\_ 13. sunspots
- \_\_\_\_\_ 14. chromosphere
- \_\_\_\_\_ 15. corona
- \_\_\_\_\_ 16. supernova
- \_\_\_\_\_ 17. binary system
- \_\_\_\_\_ 18. photosphere
- \_\_\_\_\_ 19. galaxy
- \_\_\_\_\_ 20. Big Bang theory

### Column II

- a. explanation for the beginning of the universe
- b. relatively cool star that has expanded to more than 700 times as large as our sun
- c. groups of stars whose positions in the sky seem to change as Earth moves
- d. distance that light travels in one year
- e. lowest layer of the Sun's atmosphere that gives off light
- f. classification of about 90 percent of the stars
- g. actual amount of light a star gives off
- h. two or more stars revolving around one another
- i. produced from an explosion that occurs when a star's core collapses
- j. star in which only neutrons can exist in its core
- k. earliest stage of a star's formation
- l. amount of a star's light observed on Earth
- m. large, cool expanding star in which helium fuses to form carbon
- n. object so dense that nothing, including light, can escape it
- o. layer of the sun's atmosphere above the photosphere
- p. large group of stars, gas, and dust held together by gravity
- q. apparent shift in position of an object when viewed from different places; used to determine distances
- r. small, hot star consisting of a hot, dense core contracting under the force of gravity
- s. dark, cooler areas of the Sun's surface
- t. outer layer and largest part of the Sun's atmosphere



**Chapter Test (continued)**

- \_\_\_\_\_ 13. Although it has a greater \_\_\_\_\_ than Sirius, Rigel does not look as bright in the night sky.  
 a. apparent magnitude                      c. distance from Earth  
 b. parallax                                      d. absolute magnitude
- \_\_\_\_\_ 14. A \_\_\_\_\_ is an object so dense that nothing can escape its gravity field.  
 a. supernova                      b. neutron star                      c. black hole                      d. supergiant
- \_\_\_\_\_ 15. Dark, cooler areas on the Sun's surface are called \_\_\_\_\_.  
 a. Sunspots                      b. solar flares                      c. coronas                      d. prominences
- \_\_\_\_\_ 16. The Clouds of Magellan are two \_\_\_\_\_ galaxies that orbit the Milky Way.  
 a. normal spiral                      b. barred spiral                      c. irregular                      d. elliptical
- \_\_\_\_\_ 17. The coolest stars in the sky are \_\_\_\_\_ in color.  
 a. yellow                      b. red                      c. blue                      d. green
- \_\_\_\_\_ 18. A large group of stars, gas, and dust held together by gravity is a \_\_\_\_\_.  
 a. galaxy                      b. constellation                      c. Local Group                      d. elliptical galaxy

**II. Understanding Concepts****Skill: Recognizing Cause and Effect**

**Directions:** Identify the cause and effect given in each sentence by writing **C** for cause and **E** for effect in the blanks.

1. \_\_\_\_\_ a. An object moves away from you.  
 \_\_\_\_\_ b. Its wavelengths get longer and shift to red on a spectrum.
2. \_\_\_\_\_ a. A supernova is produced.  
 \_\_\_\_\_ b. A star's core collapses and its outer portion explodes.

**Skill: Sequencing**

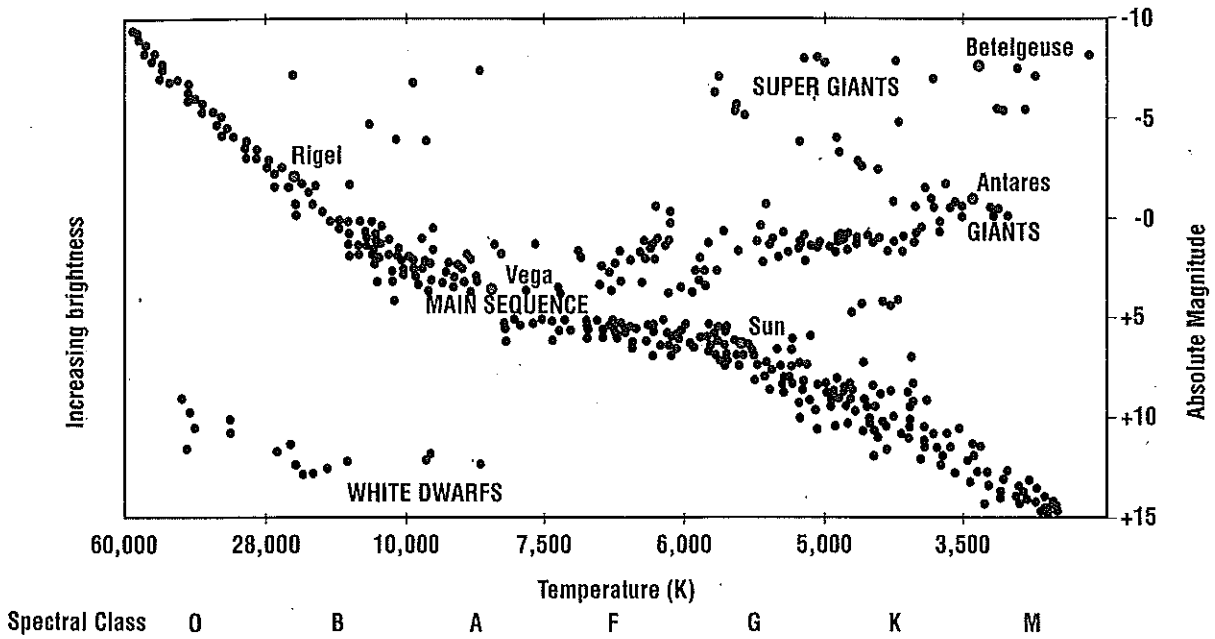
3. Sequence the color of the stars according to their temperature. List the hottest color first.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

4. Number the following events in the order that they would happen.
- \_\_\_\_\_ a. High-energy particles emitted by solar flares interact with Earth's atmosphere near the polar regions.
- \_\_\_\_\_ b. Gases near a sunspot brighten up suddenly and erupt as solar flares.
- \_\_\_\_\_ c. Earth's atmosphere radiates lights called aurora.

## Chapter Test (continued)

### Skill: Interpreting Scientific Illustrations

Directions: Use the diagram to help you answer the following questions.



5. Are giants hotter than white dwarfs? \_\_\_\_\_
6. Is Antares or Vega hotter than the Sun? \_\_\_\_\_
7. What type of star is Betelgeuse? \_\_\_\_\_
8. Is the Sun brighter than a white dwarf? \_\_\_\_\_

### Skill: Observing and Inferring

9. Three stars are 4.3 light-years from Earth. Star A has the least brightness, Star B has the greatest brightness, and Star C has a brightness in between. Which of these stars do you think will have the greatest apparent magnitude? Why?

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