

## Stars, Galaxies, and the Universe ▪ Chapter 15 Pre-Assessment

Write the letter of the correct answer on the line at the left.

- \_\_\_\_\_ 1. What is light?
  - a. electrical energy from the sun
  - b. matter that travels as waves
  - c. energy that travels in the form of waves
  - d. matter that allows us to see things
  
- \_\_\_\_\_ 2. As the result of nuclear fusion, the sun gives off
  - a. mechanical and electrical energy.
  - b. chemical energy and sound.
  - c. electrical energy and light.
  - d. heat and light.
  
- \_\_\_\_\_ 3. How many stars are in our solar system?
  - a. one
  - b. hundreds
  - c. thousands
  - d. millions
  
- \_\_\_\_\_ 4. The planets and moons in our solar system are visible because they
  - a. emit their own light.
  - b. undergo nuclear fusion.
  - c. absorb light from the sun.
  - d. reflect light from the sun.

## Stars, Galaxies, and the Universe ▪ Section 15.1 Quiz

Fill in the blank to complete each statement.

1. Of all of the energy in the electromagnetic spectrum,  
\_\_\_\_\_ have the longest wavelengths.
2. \_\_\_\_\_ telescopes use mirrors to gather and focus light to produce images.
3. Many observatories are located on mountaintops to prevent distortion from \_\_\_\_\_.
4. \_\_\_\_\_ telescopes do not need to be located on mountaintops because the electromagnetic radiation they detect can pass readily through the atmosphere.
5. The hottest objects in space are often studied with \_\_\_\_\_ telescopes.

**Stars, Galaxies, and the Universe** ▪ *Section 15.2 Quiz*

*If the statement is true write true. If the statement is false, change the underlined word or words to make the statement true.*

- \_\_\_\_\_ 1. An H-R digram is an imaginary pattern of stars in the sky.
- \_\_\_\_\_ 2. The absolute brightness of a star depends only on its size.
- \_\_\_\_\_ 3. Absolute brightness is a star's brightness as seen from Earth.
- \_\_\_\_\_ 4. Parallax can be used to calculate the distance to a nearby star.
- \_\_\_\_\_ 5. Most of the stars in the universe are main-sequence stars.

**Stars, Galaxies, and the Universe** ▪ *Section 15.3 Quiz*

*Fill in the blank to complete each statement.*

1. A star is born when a nebula contracts enough so that \_\_\_\_\_ begins.
2. The stages in any star's life cycle depend on the star's original \_\_\_\_\_.
3. A star with a high mass will eventually explode as a \_\_\_\_\_.
4. The core of a low-mass or medium-mass star that is left behind a planetary nebula is called a \_\_\_\_\_.
5. \_\_\_\_\_ emit steady beams of radiation in narrow cones.

## Stars, Galaxies, and the Universe ▪ Section 15.4 Quiz

*If the statement is true write true. If the statement is false, change the underlined word or words to make the statement true.*

- \_\_\_\_\_ 1. A star in any star system that periodically blocks the light from another star is an eclipsing binary star.
- \_\_\_\_\_ 2. A galaxy contains only star clusters.
- \_\_\_\_\_ 3. Quasars are extremely bright, active young galaxies.
- \_\_\_\_\_ 4. Our sun is located about 25,000 light-years from the center of an irregular galaxy.
- \_\_\_\_\_ 5. Some of the objects in the universe, from *smallest to largest*, are our solar system, the Milky Way, and the Local Group.

## Stars, Galaxies, and the Universe ▪ Section 15.5 Quiz

*If the statement is true write true. If the statement is false, change the underlined word or words to make the statement true.*

- \_\_\_\_\_ 1. The theory that explains how the universe formed is called Hubble's law.
- \_\_\_\_\_ 2. Evidence for the big bang theory includes Edwin Hubble's observations that most galaxies are moving toward Earth.
- \_\_\_\_\_ 3. Cosmic background radiation is leftover thermal energy from the big bang.
- \_\_\_\_\_ 4. Our solar system formed about 13.7 billion years ago.
- \_\_\_\_\_ 5. A force called dark energy is thought to be causing galaxies to move away from one another faster than in the past.