

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

7 A

Date: \_\_\_\_\_

## Big Bang Theory Assessment

Name \_\_\_\_\_



**Multiple Choice: Write the letter of the correct answer next to the question number.**

\_\_\_\_\_ 1. Most scientists believe the big bang theory explains which of the following?

- A. how our planets and moons formed
- B. how our universe began
- C. how the Sun turns hydrogen into helium
- D. how fast light travels through space

\_\_\_\_\_ 2. Which scientist was responsible for coining the phrase "big bang"?

- A. Fred Hoyle
- B. Albert Einstein
- C. Sir Isaac Newton
- D. Edward Hubble

\_\_\_\_\_ 3. Which of the following statements are true about the universe?

- A. The galaxies are moving towards us and each other.
- B. The galaxies are moving away from us and each other.
- C. The universe remains static or unchanged in motion.
- D. None of the above statements are true.

\_\_\_\_\_ 4. Light emitted from a star or galaxy can be separated into a band of color called a \_\_\_\_\_.

- A. redshift
- B. wavelength
- C. spectrum
- D. microwave

\_\_\_\_\_ 5. Cosmic microwave background radiation is a form of \_\_\_\_\_.

- A. matter
- B. energy
- C. visible light
- D. water

\_\_\_\_\_ 6. Which scientist discovered the redshift?

- A. Fred Hoyle
- B. Edward Hubble
- C. Albert Einstein
- D. Sir Isaac Newton

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**Multiple Choice (continued): Write the letter of the correct answer next to the question number.**

\_\_\_\_\_ 7. Which two elements make up most of the universe?

- A. hydrogen and oxygen
- B. helium and carbon
- C. hydrogen and helium
- D. oxygen and carbon

\_\_\_\_\_ 8. If a light is moving away from us, it gets stretched out. This makes it appear more \_\_\_\_\_.

- A. red
- B. blue
- C. yellow
- D. purple

\_\_\_\_\_ 9. The \_\_\_\_\_ represent the chemical elements found in a star.

- A. galactic DNA
- B. absorption lines
- C. absolution lines
- D. galactic lines

\_\_\_\_\_ 10. As the wavelength increases, the frequency of the wave \_\_\_\_\_.

- A. decreases
- B. increases
- C. stays the same
- D. doesn't change; only frequency can

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**Short Answer: Respond to each item with complete sentences.**

11. How does redshift support the big bang theory?

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12. How does the existence of cosmic microwave background radiation support the big bang theory?

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13. How does the abundance of hydrogen and helium support the big bang theory?

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