

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. absorption 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?

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

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