

Chemistry in the Cosmos

Introduction To Chemistry · Answer Key · 18 Questions

1. What is the most abundant element in the universe?

- A) Oxygen
- B) Hydrogen**
- C) Carbon
- D) Nitrogen

2. Which gas is responsible for the red color of Mars?

- A) Methane
- B) Nitrogen
- C) Iron Oxide**
- D) Sulfur Dioxide

3. What chemical compound is the primary component of Saturn's rings?

- A) Carbon Dioxide
- B) Water Ice**
- C) Ammonia
- D) Silicates

4. The atmosphere of Venus is primarily composed of which gas?

- A) Oxygen
- B) Nitrogen
- C) Carbon Dioxide**
- D) Helium

5. What element is crucial for life as we know it and is abundant in stars?

- A) Helium
- B) Iron
- C) Carbon**
- D) Gold

6. The Sun is primarily made up of which two elements?

- A) Oxygen and Carbon
- B) Hydrogen and Helium**
- C) Nitrogen and Oxygen
- D) Iron and Nickel

7. What is the chemical formula for water?

- A) CO₂
- B) O₂
- C) H₂O**
- D) NaCl

8. Which planet is known for its strong magnetic field, which protects it from solar wind?

- A) Mercury
- B) Venus
- C) Earth**
- D) Mars

9. What is the main gas that makes up the atmospheres of most gas giant planets like Jupiter and Saturn?

- A) Oxygen
- B) Nitrogen
- C) Hydrogen**
- D) Carbon Monoxide

10. The rings of Uranus are primarily composed of what?

- A) Dust and Rock
- B) Ice Particles**
- C) Gaseous Clouds
- D) Metallic Fragments

11. What element is a key component of diamonds, found even in some meteorites?

- A) Silicon
- B) Carbon**
- C) Aluminum
- D) Titanium

12. What is the process by which stars generate energy, involving the fusion of lighter atomic nuclei into heavier ones?

- A) Fission
- B) Combustion
- C) Nuclear Fusion**
- D) Oxidation

13. What is the chemical name for common table salt?

- A) Potassium Chloride
- B) Magnesium Sulfate
- C) Sodium Chloride**
- D) Calcium Carbonate

14. Which element is a major component of Earth's atmosphere, making up about 78%?

- A) Oxygen
- B) Argon
- C) Nitrogen**
- D) Carbon Dioxide

15. Titan, Saturn's largest moon, has a thick atmosphere rich in which gas?

- A) Methane**
- B) Ammonia
- C) Hydrogen Sulfide
- D) Ethane

16. What is the simplest atom, consisting of one proton and one electron?

- A) Helium
- B) Lithium
- C) Hydrogen**
- D) Boron

17. What is the common name for the solid form of carbon found in meteorites, known for its extreme hardness?

- A) Graphite
- B) Diamond**
- C) Graphene
- D) Lonsdaleite

18. The blue color of Neptune and Uranus is due to the presence of which gas in their atmospheres?

- A) Methane**
- B) Helium
- C) Oxygen
- D) Nitrogen