

Astrobiology and Cosmic Fundamentals

Advanced Biology And Space Science · Answer Key · 25 Questions

1. Which planet in our solar system is known as the Red Planet?

- A) Venus
- B) Mars**
- C) Jupiter
- D) Saturn

2. What is the primary source of energy for life on Earth?

- A) The Moon
- B) The Sun**
- C) Geothermal vents
- D) Lightning

3. Which of these is the largest planet in our solar system?

- A) Earth
- B) Neptune
- C) Jupiter**
- D) Saturn

4. What celestial body orbits the Earth?

- A) The Sun
- B) Mars
- C) The Moon**
- D) Venus

5. Which gas, essential for human respiration, is a key focus in searching for signs of life on other planets?

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

6. What is the term for the region around a star where liquid water can exist on a planet's surface?

- A) Goldilocks zone**
- B) Dark zone
- C) Ice belt
- D) Plasma rim

7. Which galaxy is home to the Earth and our solar system?

- A) Andromeda
- B) Sombrero
- C) Milky Way**
- D) Triangulum

8. What is the name of the nearest star to the Earth?

- A) Proxima Centauri
- B) Sirius
- C) The Sun**
- D) Betelgeuse

9. Which planet is famous for its prominent ring system?

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

10. What force keeps planets in orbit around the Sun?

- A) Magnetism
- B) Gravity**
- C) Static electricity
- D) Friction

11. What is the chemical symbol for the water molecule, a fundamental requirement for life?

- A) CO₂
- B) H₂O**
- C) O₂
- D) NaCl

12. Which planet is closest to the Sun?

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

13. What type of celestial object is the Sun?

- A) Planet
- B) Asteroid
- C) Star**
- D) Moon

14. Which planet is often called Earth's 'sister planet' due to its similar size and density?

- A) Mars
- B) Venus**
- C) Jupiter
- D) Uranus

15. What phenomenon causes the Earth to have day and night?

- A) Rotation**
- B) Revolution
- C) Tidal force
- D) Eclipse

16. Which of the following is considered a terrestrial planet?

- A) Jupiter
- B) Saturn
- C) Mars**
- D) Neptune

17. What is the main component of the Sun?

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

18. What do plants consume from the atmosphere to perform photosynthesis, a process vital for life?

- A) Nitrogen
- B) Carbon dioxide**
- C) Helium
- D) Neon

19. Which planet has the longest 'year' (time to orbit the Sun)?

- A) Mercury
- B) Earth
- C) Neptune**
- D) Jupiter

20. What are the icy bodies that develop a tail when approaching the Sun called?

- A) Asteroids
- B) Comets**
- C) Moons
- D) Meteorites

21. What protective layer in Earth's atmosphere shields life from harmful solar radiation?

- A) Ozone layer**
- B) Carbon layer
- C) Hydrogen layer
- D) Oxygen layer

22. How many planets are currently recognized in our solar system?

- A) 7
- B) 8**
- C) 9
- D) 10

23. Which planet rotates on its side compared to its orbit?

- A) Saturn
- B) Uranus**
- C) Neptune
- D) Mars

24. What are small, rocky bodies that orbit the Sun, mostly found between Mars and Jupiter?

- A) Asteroids**
- B) Nebulae
- C) Black holes
- D) Pulsars

25. What is the name of the force that causes stars to form from clouds of gas and dust?

- A) Expansion
- B) Gravity**
- C) Radiation
- D) Convection