

Cosmic Geography

Physical Geography · Answer Key · 15 Questions

1. What is the approximate atmospheric pressure at the surface of Mars, expressed as a fraction of Earth's sea-level atmospheric pressure?

- A) 1/10th
- B) 1/100th**
- C) 1/1000th
- D) 1/250th

2. The Kepler Space Telescope discovered exoplanets by primarily observing which phenomenon?

- A) Radial velocity shifts
- B) Gravitational lensing
- C) Transits**
- D) Microlensing

3. Which of the following is NOT a recognized classification of dwarf planets by the International Astronomical Union (IAU)?

- A) Plutoid
- B) Ceres**
- C) Haumea
- D) Eris

4. The Great Red Spot on Jupiter is a persistent storm that has been observed for at least how many centuries?

- A) One
- B) Two
- C) Three**
- D) Four

5. What is the dominant component of the atmosphere of Venus, responsible for its extreme greenhouse effect?

- A) Nitrogen
- B) Oxygen
- C) Carbon Dioxide**
- D) Sulfuric Acid

6. The Kuiper Belt is a region of icy bodies located beyond the orbit of which planet?

- A) Mars
- B) Jupiter
- C) Saturn

D) Neptune

7. Which of the following celestial bodies is known to have active cryovolcanism, erupting water, ammonia, or methane?

- A) Mercury
- B) Ganymede

C) Titan

- D) Ceres

8. The Roche limit describes the minimum distance at which a celestial body can approach another without being torn apart by what force?

- A) Solar wind

B) Tidal forces

- C) Magnetic fields
- D) Gravitational resonance

9. What is the name of the hypothetical boundary around a black hole from which nothing, not even light, can escape?

A) Schwarzschild radius

- B) Photon sphere
- C) Ergosphere
- D) Accretion disk

10. The cosmic microwave background radiation is evidence for which cosmological model?

- A) Steady State model

B) Big Bang model

- C) Oscillating Universe model
- D) Eternal Inflation model

11. Which planet in our solar system has the most eccentric orbit (i.e., is furthest from being circular)?

A) Mercury

- B) Mars
- C) Neptune
- D) Pluto

12. What is the primary reason for the blue color of Uranus and Neptune?

A) High concentration of methane absorbing red light

B) Reflection of Earth's blue sky

C) Presence of liquid water oceans

D) Abundance of blue-hued atmospheric gases

13. The region of space around a star where liquid water could potentially exist on the surface of a planet is known as the:

A) Oort Cloud

B) Roche Lobe

C) Circumstellar Habitable Zone

D) Galactic Habitable Zone

14. Which moon in our solar system is the only one known to possess a substantial atmosphere, primarily composed of nitrogen?

A) Europa

B) Io

C) Titan

D) Enceladus

15. The most abundant element in the universe is:

A) Helium

B) Oxygen

C) Carbon

D) Hydrogen