

Solar System Deep Dive

Solar System Basics · Answer Key · 12 Questions

1. Which dwarf planet, located in the asteroid belt, is the only one known to have a substantial atmosphere that can freeze and fall as snow?

- A) Eris
- B) Makemake
- C) Ceres**
- D) Pluto

2. The Great Red Spot on Jupiter is a persistent storm. Approximately how long has this storm been observed by astronomers?

- A) Around 50 years
- B) Around 100 years
- C) Around 200 years
- D) Around 400 years**

3. Saturn's rings are primarily composed of what material?

- A) Rock and dust
- B) Metallic ice crystals**
- C) Frozen gases like methane
- D) Molten lava

4. Which of the following planets has the most eccentric (least circular) orbit among the eight major planets?

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

5. Titan, Saturn's largest moon, is unique in our solar system for possessing what?

- A) A molten iron core
- B) Active cryovolcanoes spewing water ice
- C) A thick atmosphere with liquid methane lakes**
- D) A global ocean of liquid ammonia

6. What is the term for the region beyond Neptune, populated by icy bodies and dwarf planets like Pluto?

- A) The Oort Cloud
- B) The Asteroid Belt
- C) The Kuiper Belt**
- D) The Heliosphere

7. Which planet is known for its extreme axial tilt, causing it to rotate on its side?

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

8. The 'morning star' and 'evening star' that are often visible in the sky are actually which planet?

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

9. What process is believed to be responsible for the formation of the solar system from a giant cloud of gas and dust?

- A) The Big Crunch
- B) Gravitational collapse**
- C) Cosmic inflation
- D) Stellar fusion

10. Which moon in our solar system is thought to have a subsurface ocean that might harbor life, making it a prime target for astrobiological research?

- A) Io (Jupiter)
- B) Europa (Jupiter)**
- C) Titan (Saturn)
- D) Triton (Neptune)

11. The 'tail' of a comet always points away from the Sun due to what phenomenon?

- A) The comet's rotation
- B) The Sun's gravity
- C) The solar wind and radiation pressure**
- D) The comet's internal magnetic field

12. Which terrestrial planet has the hottest surface temperature, despite not being the closest to the Sun, due to a runaway greenhouse effect?

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