

Solar System Advanced Concepts

Astronomy · Answer Key · 18 Questions

1. Which planet has the most extensive and complex ring system composed primarily of ice and rock particles?

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

2. Which planet is known as the 'Ice Giant' and has an axial tilt that causes it to rotate on its side?

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

3. What is the name of the region beyond Neptune that contains icy bodies and dwarf planets?

- A) Asteroid Belt
- B) Oort Cloud
- C) Kuiper Belt**
- D) Galactic Halo

4. Which gas giant planet is the largest in our solar system and possesses a massive storm known as the Great Red Spot?

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

5. What defines a terrestrial planet in our solar system?

- A) Composed primarily of gas
- B) Has a rocky, solid surface**
- C) Located beyond the asteroid belt
- D) Lacks an atmosphere

6. Which planet has the longest 'year' (orbital period around the Sun)?

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

7. The asteroid belt is situated between the orbits of which two planets?

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

8. Which planet has the hottest surface temperature despite not being the closest to the Sun?

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

9. What is the main chemical component of the Sun?

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

10. Which dwarf planet was reclassified from its status as a planet in 2006?

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

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

- A) Magnetic pull
- B) Gravity**
- C) Solar wind
- D) Centrifugal force

12. How many moons does the planet Mars have?

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

13. Which planet is known as the 'Red Planet' due to iron oxide on its surface?

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

14. What is the primary difference between an asteroid and a comet?

A) Comets are made of ice and dust; asteroids are made of rock and metal

B) Asteroids are larger than planets

C) Comets orbit only the Moon

D) Asteroids are made of gas

15. What is the name of the process by which the Sun produces energy?

A) Combustion

B) Nuclear fusion

C) Fission

D) Evaporation

16. Which moon of Jupiter is considered the largest moon in the entire solar system?

A) Europa

B) Titan

C) Ganymede

D) Io

17. Which planet has a day that is longer than its year?

A) Mercury

B) Venus

C) Mars

D) Neptune

18. What phenomenon occurs when the Moon passes directly between the Sun and Earth?

A) Lunar eclipse

B) Solar eclipse

C) Equinox

D) Solstice