Solar System Advanced Foundations

Astronomy · Practice Test · 10 Questions

1. Which layer of the Sun is considered the 'surface' and is the source of the light we see on Earth?

A) Corona
B) Chromosphere
C) Photosphere
D) Convection Zone

2. What is the primary factor that causes the Kuiper Belt to exist in a disk-like shape beyond Neptune?

A) The gravitational influence of Neptune
B) Solar wind pressure
C) The Oort Cloud's magnetic field
D) Residual matter from the early solar nebula

3. Which planet has a rotational period that is longer than its orbital period around the Sun?

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

4. What property of a planet's orbit determines the variation in its orbital speed at different points in its path?

A) Orbital inclination
B) Eccentricity
C) Axial tilt
D) Sidereal rotation

5. Which of the following moons is known for having a significant atmosphere thicker than that of Earth's Moon?

A) Europa
B) Ganymede
C) Titan
D) Callisto

6. The Great Red Spot on Jupiter is classified as what type of meteorological phenomenon?

A) An anticyclonic storm
B) A volcanic plume
C) A permanent dust storm
D) A localized magnetic anomaly

7. Which of the following correctly describes the position of the asteroid belt?

A) Between Earth and Mars
B) Between Mars and Jupiter
C) Between Jupiter and Saturn
D) Between Saturn and Uranus

8. What is the primary composition of the rings surrounding Saturn?

A) Compressed gas and liquid metallic hydrogen
B) Iron-nickel metallic fragments
C) Water ice and rocky debris
D) Frozen nitrogen and methane crystals

9. Which law of planetary motion states that a line segment joining a planet and the Sun sweeps out equal areas during equal intervals of time?

A) Kepler's First Law
B) Kepler's Second Law
C) Kepler's Third Law
D) Newton's Law of Universal Gravitation

10. What is the defining characteristic that distinguishes dwarf planets from major planets according to the IAU?

A) They do not orbit the Sun directly
B) They have not cleared their orbital neighborhood
C) They lack a spherical shape
D) They possess no natural satellites