

Advanced Celestial Geography

Physical Geography · Answer Key · 20 Questions

1. Which planet possesses the largest volcanic feature in the solar system, Olympus Mons?

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

2. What is the specific name for the region in the atmosphere of Venus where temperatures and pressures are Earth-like?

- A) The Hadean Zone
- B) The Mesopause
- C) The Goldilocks Layer**
- D) The Aphrodite Belt

3. The Kuiper Cliff is a sharp drop in the density of objects at the outer edge of the Kuiper Belt, located at approximately how many Astronomical Units (AU) from the Sun?

- A) 30 AU
- B) 50 AU**
- C) 75 AU
- D) 100 AU

4. Which moon of Saturn is known for having a subsurface ocean and plumes of water vapor erupting from its 'tiger stripe' fractures?

- A) Titan
- B) Rhea
- C) Enceladus**
- D) Dione

5. What is the primary constituent of the thin atmosphere found on the planet Mercury?

- A) Carbon Dioxide
- B) Nitrogen
- C) Oxygen
- D) Sodium**

6. The 'Great Red Spot' on Jupiter is a high-pressure storm system that rotates in which direction?

- A) Clockwise
- B) Counter-clockwise**
- C) It does not rotate
- D) It oscillates

7. What is the orbital period of the dwarf planet Eris around the Sun?

- A) 124 years
- B) 248 years
- C) 557 years**
- D) 824 years

8. Which chemical compound is responsible for the distinct blue color of Neptune's atmosphere by absorbing red light?

- A) Methane**
- B) Ammonia
- C) Hydrogen Sulfide
- D) Helium

9. The Roche limit is the distance within which a celestial body, held together only by its own gravity, will disintegrate due to a second celestial body's:

- A) Magnetic field
- B) Tidal forces**
- C) Radiation pressure
- D) Atmospheric drag

10. Which constellation contains the star system Alpha Centauri, the closest stellar system to the Sun?

- A) Crux
- B) Centaurus**
- C) Carina
- D) Orion

11. What is the name of the hypothetical region of icy objects surrounding the solar system at a distance of up to 100,000 AU?

- A) The Oort Cloud**
- B) The Scattered Disc
- C) The Interstellar Medium
- D) The Heliopause

12. Phobos, one of the moons of Mars, is slowly spiraling toward the planet due to what physical phenomenon?

- A) Solar wind
- B) Tidal deceleration**
- C) Magnetospheric drag
- D) Yarkovsky effect

13. Which classification of galaxy is characterized by a central bar-shaped structure composed of stars?

- A) Elliptical
- B) Irregular
- C) Lenticular
- D) Barred Spiral**

14. What is the specific term for the point in an orbit where a planet is closest to the Sun?

- A) Aphelion
- B) Perihelion**
- C) Perigee
- D) Ascending Node

15. The 'Karman Line', generally accepted as the boundary between Earth's atmosphere and outer space, is located at what altitude?

- A) 50 km
- B) 80 km
- C) 100 km**
- D) 120 km

16. Which moon of Jupiter is the most volcanically active body in the solar system?

- A) Europa
- B) Ganymede
- C) Callisto
- D) Io**

17. What is the measurement of the total energy output of a star per unit time called?

- A) Luminosity**
- B) Apparent Magnitude
- C) Radiant Flux
- D) Spectral Irradiance

18. The dwarf planet Ceres is located within which region of the solar system?

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

19. Which type of star is the most common in the Milky Way galaxy?

- A) Blue Giant
- B) Red Dwarf**
- C) Yellow Dwarf
- D) White Dwarf

20. What is the approximate age of the universe according to current cosmological models?

- A) 4.5 billion years
- B) 9.2 billion years
- C) 13.8 billion years**
- D) 18.5 billion years