

# Pioneering Moments in Astronomy

Astronomy · Answer Key · 20 Questions

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**1. Who is credited with the first systematic use of a telescope for astronomical observation, leading to discoveries like the phases of Venus?**

- A) Johannes Kepler
- B) Isaac Newton
- C) Galileo Galilei**
- D) Nicolaus Copernicus

**2. What significant celestial body did Edwin Hubble definitively prove to be outside our own Milky Way galaxy in 1924?**

- A) The Andromeda Nebula**
- B) The Orion Nebula
- C) The Crab Nebula
- D) The Pleiades Cluster

**3. The discovery of the first exoplanet orbiting a Sun-like star is attributed to which pair of astronomers in 1995?**

- A) Michel Mayor and Didier Queloz**
- B) Frank Drake and Carl Sagan
- C) Geoffrey Marcy and Paul Butler
- D) Sara Seager and Dimitar Sasselov

**4. Which invention by Galileo Galilei revolutionized astronomical observation in the early 17th century?**

- A) The sextant
- B) The refracting telescope**
- C) The reflecting telescope
- D) The spectroscope

**5. What fundamental force did Isaac Newton describe in his law of universal gravitation, which explained planetary motion?**

- A) Electromagnetism
- B) The strong nuclear force
- C) The weak nuclear force
- D) Gravity**

**6. The first successful artificial satellite launched into Earth orbit was:**

- A) Explorer 1
- B) Vanguard 1
- C) Sputnik 1**
- D) Telstar 1

**7. Who was the first person to propose a heliocentric model of the solar system, placing the Sun at the center?**

- A) Ptolemy
- B) Aristotle
- C) Nicolaus Copernicus**
- D) Tycho Brahe

**8. The discovery of the Cosmic Microwave Background radiation in 1964 provided strong evidence for which cosmological theory?**

- A) The Steady State theory
- B) The Big Bang theory**
- C) The Oscillating Universe theory
- D) The Inflationary Universe theory

**9. Which astronomer is credited with discovering Uranus, the first planet found since antiquity, in 1781?**

- A) Pierre-Simon Laplace
- B) William Herschel**
- C) Charles Messier
- D) Jocelyn Bell Burnell

**10. The development of which type of telescope by Isaac Newton in the late 17th century significantly improved upon the limitations of refractors?**

- A) Radio telescope
- B) Reflecting telescope**
- C) X-ray telescope
- D) Infrared telescope

**11. Who first measured the distance to a star other than the Sun, using parallax, for Alpha Centauri?**

- A) Friedrich Bessel**
- B) Giovanni Cassini
- C) Christiaan Huygens
- D) Carl Sagan

**12. What significant event in space exploration occurred in 1969 with the Apollo 11 mission?**

- A) First spacewalk
- B) First woman in space
- C) First humans landed on the Moon**
- D) First probe to orbit Mars

**13. The concept of black holes was first mathematically described by which physicist?**

- A) Albert Einstein
- B) Max Planck
- C) Karl Schwarzschild**
- D) Stephen Hawking

**14. What astronomical tool, invented in the 1930s, allows astronomers to observe celestial objects emitting radio waves?**

- A) The Hubble Space Telescope
- B) The Very Large Array (VLA)**
- C) The Chandra X-ray Observatory
- D) The James Webb Space Telescope

**15. The discovery of the planet Neptune in 1846 was a triumph of what scientific method?**

- A) Observational astronomy alone
- B) Mathematical prediction based on orbital perturbations**
- C) Accidental discovery by a telescope manufacturer
- D) Analysis of meteoritic samples

**16. Which female astronomer is credited with the discovery of pulsars in 1967?**

- A) Vera Rubin
- B) Cecilia Payne-Gaposchkin
- C) Jocelyn Bell Burnell**
- D) Caroline Herschel

**17. The first images of the surface of another planet (Venus) were obtained by which Soviet probe in 1970?**

- A) Venera 7**
- B) Mariner 2
- C) Pioneer Venus Orbiter
- D) Magellan

**18. Who developed the first comprehensive star catalog, the 'Almagest', in the 2nd century AD, which remained influential for over a millennium?**

A) Aristarchus of Samos

**B) Hipparchus**

C) Heraclides of Pontus

D) Eratosthenes

**19. The first spacecraft to successfully leave the solar system and enter interstellar space was:**

**A) Voyager 1**

B) Pioneer 10

C) New Horizons

D) Voyager 2

**20. What fundamental discovery about the composition of stars was made by Cecilia Payne-Gaposchkin in the 1920s?**

A) Stars are primarily made of iron.

B) Stars are primarily made of helium.

**C) Stars are primarily made of hydrogen and helium.**

D) Stars are primarily made of carbon.