Space Science: 100 Questions and Answers

1. What is a black hole?

A black hole is a region in space where the gravitational pull is so strong that nothing, not even light, can escape from it.

2. What is the Big Bang theory?

The Big Bang theory is the leading explanation about how the universe began, proposing that the universe expanded from an extremely hot and dense singularity around 13.8 billion years ago.

3. What are exoplanets?

Exoplanets are planets that orbit stars outside our solar system. Thousands have been discovered in recent years.

4. What is dark matter?

Dark matter is a type of matter that does not emit, absorb, or reflect light, making it invisible, but its presence is inferred from its gravitational effects.

5. What is a supernova?

A supernova is a powerful and luminous explosion that occurs at the end of a star's life cycle, particularly for massive stars.

6. How do stars form?

Stars form from clouds of gas and dust in space, known as nebulae. Under gravity, these clouds collapse, heat up, and begin nuclear fusion.

7. What is the difference between a planet and a dwarf planet?

A planet is a celestial body that orbits a star, is spherical due to its own gravity, and has cleared its orbit of other debris. A dwarf planet meets all but the last of these criteria.

8. What is the Milky Way?

The Milky Way is the galaxy that contains our solar system, composed of billions of stars, including the Sun.

9. What is the Hubble Space Telescope?

The Hubble Space Telescope is a large space-based observatory launched in 1990 that has provided some of the most detailed images of space.

10. What is dark energy?

Dark energy is a mysterious force that is causing the accelerated expansion of the universe, comprising about 68% of the total energy in the universe.