High School Astronomy Fundamentals

Astronomy · Answer Key · 8 Questions

1. Which region in the Solar System separates the orbits of Mars and Jupiter?

A) Kuiper Belt
B) Asteroid Belt
C) Oort Cloud
D) Scattered Disc

2. What is the primary element converted into helium during nuclear fusion inside main sequence stars like the Sun?

A) Carbon
B) Hydrogen
C) Oxygen
D) Nitrogen

3. According to Kepler's First Law of Planetary Motion, what shape are the orbits of planets around the Sun?

A) Perfect circles
B) Ellipses
C) Parabolas
D) Hyperbolas

4. What physical property does a light-year measure?

A) Time
B) Distance
C) Brightness
D) Mass

5. How is the Milky Way galaxy classified based on its structural shape?

A) Elliptical galaxy
B) Irregular galaxy
C) Barred spiral galaxy
D) Lenticular galaxy

6. When light from a distant galaxy is 'redshifted', what does this indicate about the galaxy's motion relative to Earth?

A) It is moving away from Earth
B) It is moving toward Earth
C) It is remaining stationary
D) It is rotating faster

7. What is the main cause of the changing seasons on Earth?

A) Changes in Earth's distance from the Sun
B) The tilt of Earth's rotational axis
C) Fluctuations in solar radiation output
D) Ocean currents changing speed

8. During a total solar eclipse, which celestial body passes directly between Earth and the Sun?

A) Mars
B) Venus
C) The Moon
D) Mercury