

Junior Physics Frontiers

Physics · Practice Test · 18 Questions

1. What is the smallest known particle that makes up protons and neutrons?

- A) Quark
- B) Electron
- C) Atom
- D) Molecule

2. Which force keeps planets orbiting around the Sun?

- A) Magnetism
- B) Gravity
- C) Friction
- D) Electricity

3. What is the name of the particle that carries light energy?

- A) Proton
- B) Neutron
- C) Photon
- D) Electron

4. At the very center of an atom, what is the heavy core called?

- A) Shell
- B) Nucleus
- C) Cloud
- D) Orbit

5. Which state of matter exists at extremely high temperatures where electrons are stripped from atoms?

- A) Solid
- B) Liquid
- C) Gas
- D) Plasma

6. What do we call the phenomenon where light bends when it enters a new material like water?

- A) Reflection
- B) Refraction
- C) Absorption
- D) Radiation

7. Which fundamental force is responsible for holding the nucleus of an atom together?

- A) Strong Nuclear Force
- B) Weak Nuclear Force
- C) Gravity
- D) Electromagnetism

8. What is the name of the constant speed at which all light travels in a vacuum?

- A) Sound speed
- B) Light speed
- C) Terminal velocity
- D) Escape velocity

9. Which subatomic particle has a negative electrical charge?

- A) Proton
- B) Neutron
- C) Electron
- D) Quark

10. What is the term for a material that allows electricity to flow through it easily?

- A) Insulator
- B) Conductor
- C) Resistor
- D) Capacitor

11. According to physics, what happens to time as you move closer to the speed of light?

- A) It speeds up
- B) It stops
- C) It stays the same
- D) It slows down

12. What is the measure of the amount of matter in an object?

- A) Weight
- B) Mass
- C) Volume
- D) Density

13. Which particle in an atom has no electrical charge?

- A) Proton
- B) Electron
- C) Neutron
- D) Ion

14. What is the primary source of energy for our Sun?

- A) Chemical combustion
- B) Nuclear fusion
- C) Friction
- D) Gravity

15. What is the name of the invisible field that exerts force on moving charged particles?

- A) Magnetic field
- B) Thermal field
- C) Solid field
- D) Fluid field

16. What do physicists call the smallest possible unit of energy?

- A) Atom
- B) Quanta
- C) Molecule
- D) Cell

17. What is the scientific term for the total energy of motion of particles in an object?

- A) Temperature
- B) Heat
- C) Gravity
- D) Density

18. Which type of radiation consists of high-energy electromagnetic waves with the shortest wavelengths?

- A) Radio waves
- B) Visible light
- C) Gamma rays
- D) Infrared