

Junior Physics Frontiers

Physics · Answer Key · 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