

Advanced Physics Fundamentals

Physics · Practice Test · 20 Questions

1. What is the unit used to measure the intensity of sound?

- A) Hertz
- B) Decibels
- C) Amperes
- D) Newtons

2. Which state of matter has particles that are packed tightly together and vibrate in place?

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

3. What is the term for the invisible force that pulls objects toward the center of the Earth?

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

4. Light travels fastest through which of these environments?

- A) Water
- B) A vacuum
- C) Glass
- D) Air

5. What particles are found in the center (nucleus) of an atom?

- A) Protons and neutrons
- B) Electrons and ions
- C) Photons and quarks
- D) Electrons and protons

6. Which of these is a form of kinetic energy?

- A) Chemical energy
- B) Energy of motion
- C) Stored elastic energy
- D) Nuclear energy

7. What is the primary law that describes how pressure increases with depth in a fluid?

- A) Newton's First Law
- B) Archimedes' Principle
- C) Pascal's Law
- D) Hooke's Law

8. When light bends as it passes from air into water, this process is known as what?

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

9. Which of these colors of the visible light spectrum has the longest wavelength?

- A) Red
- B) Blue
- C) Green
- D) Violet

10. What kind of lens is needed to correct nearsightedness?

- A) Convex
- B) Concave
- C) Planar
- D) Cylindrical

11. In physics, what do we call the rate at which work is done?

- A) Force
- B) Energy
- C) Power
- D) Mass

12. What is the term for the opposition to the flow of electric current in a conductor?

- A) Voltage
- B) Resistance
- C) Capacitance
- D) Inductance

13. What is the name of the constant speed at which an object falls when air resistance equals the force of gravity?

- A) Terminal velocity
- B) Escape velocity
- C) Acceleration
- D) Momentum

14. Which particle in an atom has a negative electrical charge?

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

15. What type of energy is stored in a compressed spring?

- A) Thermal energy
- B) Potential energy
- C) Kinetic energy
- D) Chemical energy

16. The study of heat and its relation to energy and work is called what?

- A) Optics
- B) Thermodynamics
- C) Acoustics
- D) Mechanics

17. Which of the following is considered a non-renewable energy source?

- A) Solar
- B) Wind
- C) Coal
- D) Geothermal

18. What is the mass per unit volume of a substance called?

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

19. What force acts between two surfaces that are rubbing against each other?

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

20. According to Newton's Third Law, for every action, there is an equal and opposite what?

- A) Velocity
- B) Mass
- C) Reaction
- D) Acceleration