

Physics for Science and Engineering

Physics · Practice Test · 20 Questions

1. What is the SI unit of force?

- A) Joule
- B) Newton
- C) Pascal
- D) Watt

2. Which law states that for every action there is an equal and opposite reaction?

- A) Newton's First Law
- B) Newton's Second Law
- C) Newton's Third Law
- D) Archimedes' Principle

3. What is the rate of flow of electric charge?

- A) Voltage
- B) Resistance
- C) Current
- D) Power

4. Which law explains that the pressure applied to a confined fluid is transmitted equally?

- A) Pascal's Principle
- B) Archimedes' Principle
- C) Bernoulli's Equation
- D) Ohm's Law

5. What is the term for the energy stored in a system due to its motion?

- A) Potential Energy
- B) Internal Energy
- C) Kinetic Energy
- D) Thermal Energy

6. Which device is used to amplify electrical signals?

- A) Diode
- B) Resistor
- C) Transistor
- D) Capacitor

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8. Which law describes the relationship between the period of a planet and its distance from the sun?

- A) Kepler's First Law
- B) Kepler's Second Law
- C) Kepler's Third Law
- D) Newton's Law of Universal Gravitation

9. What term describes the spreading of waves around obstacles?

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

10. Which type of radiation has enough energy to remove electrons from atoms?

- A) Non-ionizing
- B) Ionizing
- C) Visible Light
- D) Infrared

11. What is the primary purpose of a rectifier in an electronic circuit?

- A) Convert DC to AC
- B) Convert AC to DC
- C) Amplify signals
- D) Store charge

12. Which law states that the change in internal energy is equal to heat added plus work done on the system?

- A) Zeroth Law of Thermodynamics
- B) First Law of Thermodynamics
- C) Second Law of Thermodynamics
- D) Third Law of Thermodynamics

13. What is the name for the distance between two consecutive points in phase on a wave?

- A) Amplitude
- B) Frequency
- C) Wavelength
- D) Period

14. Which of these is a non-contact force?

- A) Frictional Force
- B) Tension Force
- C) Gravitational Force
- D) Normal Force

15. What is the property of a material that measures its ability to oppose the flow of electric current?

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

16. Which type of semiconductor is formed by adding pentavalent impurities?

- A) P-type
- B) N-type
- C) Intrinsic
- D) Insulator

17. What is the frequency range of ultrasound?

- A) Below 20 Hz
- B) 20 Hz - 20 kHz
- C) Above 20 kHz
- D) Above 200 kHz

18. Which law relates the voltage, current, and resistance in a circuit?

- A) Coulomb's Law
- B) Ohm's Law
- C) Faraday's Law
- D) Lenz's Law

19. What is the process of adding impurity to a pure semiconductor called?

- A) Rectification
- B) Amplification
- C) Doping
- D) Radiation

20. Which device converts mechanical energy into electrical energy?

- A) Motor
- B) Generator
- C) Transformer
- D) Switch