

Foundational Physics Facts

Physics · Practice Test · 25 Questions

1. What is the SI unit of force?

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

2. Which of the following is a fundamental force of nature?

- A) Friction
- B) Tension
- C) Gravity
- D) Normal force

3. What is the speed of light in a vacuum, approximately?

- A) 300,000 meters per second
- B) 300,000 kilometers per hour
- C) 300,000,000 meters per second
- D) 300,000,000 miles per hour

4. According to Newton's First Law of Motion, an object at rest will remain at rest unless acted upon by an external force. What is this property called?

- A) Acceleration
- B) Velocity
- C) Momentum
- D) Inertia

5. What is the SI unit of energy?

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

6. Which phenomenon describes the bending of light as it passes from one medium to another?

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

7. What type of energy is associated with the motion of an object?

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

8. The law of conservation of energy states that energy cannot be created or destroyed, only:

- A) Increased
- B) Decreased
- C) Transformed
- D) Isolated

9. What is the SI unit of electric current?

- A) Ohm
- B) Volt
- C) Ampere
- D) Watt

10. What fundamental particle carries a negative electric charge?

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

11. What is the phenomenon where a material returns to its original shape after stress is removed?

- A) Plasticity
- B) Deformation
- C) Elasticity
- D) Fracture

12. Which property of a material describes its ability to conduct heat?

- A) Electrical conductivity
- B) Thermal conductivity
- C) Magnetic permeability
- D) Specific heat capacity

13. What is the term for the rate at which work is done?

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

14. What is the SI unit of pressure?

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

15. Which of the following is a form of electromagnetic radiation?

- A) Sound wave
- B) Water wave
- C) Microwave
- D) Seismic wave

16. What is the tendency of an object to resist changes in its state of motion?

- A) Velocity
- B) Acceleration
- C) Momentum
- D) Inertia

17. What is the SI unit of mass?

- A) Gram
- B) Kilogram
- C) Pound
- D) Ounce

18. Which principle states that the buoyant force on an object submerged in a fluid is equal to the weight of the fluid displaced by the object?

- A) Newton's Third Law
- B) Archimedes' Principle
- C) Pascal's Principle
- D) Bernoulli's Principle

19. What is the change in velocity of an object per unit of time?

- A) Speed
- B) Momentum
- C) Force
- D) Acceleration

20. What is the SI unit of electric potential difference (voltage)?

- A) Ampere
- B) Ohm
- C) Watt
- D) Volt

21. What is the phenomenon where light bounces off a surface?

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

22. What is the term for the amount of matter in an object?

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

23. What type of energy is stored in an object due to its position or state?

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

24. What is the SI unit of frequency?

- A) Second
- B) Hertz
- C) Decibel
- D) Watt

25. What force opposes motion between two surfaces in contact?

- A) Gravity
- B) Tension
- C) Friction
- D) Buoyancy