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# Physics Notes



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EduTest

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Physics Note For PAF

**1. The SI unit of force is:**

- (a) Joule
- (b) Watt
- (c) Newton
- (d) Pascal

☒ Correct Answer: (c) Newton

**2. Speed of light in vacuum is approximately:**

- (a)  $2 \times 10^6$  m/s
- (b)  $3 \times 10^8$  m/s
- (c)  $3 \times 10^6$  m/s
- (d)  $2 \times 10^8$  m/s

☒ Correct Answer: (b)  $3 \times 10^8$  m/s

**3. Which instrument is used to measure current?**

- (a) Ammeter
- (b) Voltmeter
- (c) Barometer
- (d) Thermometer

☒ Correct Answer: (a) Ammeter

**4. Energy stored in a moving body is called:**

- (a) Potential energy
- (b) Kinetic energy
- (c) Thermal energy
- (d) Electrical energy

☒ Correct Answer: (b) Kinetic energy

**5. 1 kilowatt-hour is equal to:**

- (a) 1000 J
- (b) 3600 J
- (c)  $3.6 \times 10^6$  J
- (d) 36 J

☒ Correct Answer: (c)  $3.6 \times 10^6$  J

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**6. The unit of pressure is:**

- (a) Watt
- (b) Newton
- (c) Pascal

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(d) Joule

✓ Correct Answer: (c) Pascal

**7. Acceleration due to gravity on Earth is:**

(a)  $8.9 \text{ m/s}^2$

(b)  $9.8 \text{ m/s}^2$

(c)  $10.8 \text{ m/s}^2$

(d)  $11.2 \text{ m/s}^2$

✓ Correct Answer: (b)  $9.8 \text{ m/s}^2$

**8. The unit of frequency is:**

(a) Joule

(b) Hertz

(c) Watt

(d) Newton

✓ Correct Answer: (b) Hertz

**9. Which mirror is used in car headlights?**

(a) Convex

(b) Concave

(c) Plane

(d) Cylindrical

✓ Correct Answer: (b) Concave

**10. Sound cannot travel through:**

(a) Air

(b) Water

(c) Vacuum

(d) Steel

✓ Correct Answer: (c) Vacuum

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**11. Which law states " $F = ma$ "?**

(a) Newton's 1st law

(b) Newton's 2nd law

(c) Newton's 3rd law

(d) Law of gravitation

✓ Correct Answer: (b) Newton's 2nd law

**12. The device used to measure atmospheric pressure is:**

(a) Ammeter

(b) Manometer

(c) Barometer

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(d) Hygrometer

✓ Correct Answer: (c) Barometer

**13. Which quantity is scalar?**

(a) Velocity

(b) Force

(c) Speed

(d) Acceleration

✓ Correct Answer: (c) Speed

**14. The process of changing liquid into gas is called:**

(a) Condensation

(b) Evaporation

(c) Freezing

(d) Melting

✓ Correct Answer: (b) Evaporation

**15. The rate of doing work is called:**

(a) Force

(b) Energy

(c) Power

(d) Pressure

✓ Correct Answer: (c) Power

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**16. Which lens is used to correct short-sightedness?**

(a) Convex lens

(b) Concave lens

(c) Plano-convex lens

(d) Plano-concave lens

✓ Correct Answer: (b) Concave lens

**17. The unit of resistance is:**

(a) Ohm

(b) Ampere

(c) Volt

(d) Watt

✓ Correct Answer: (a) Ohm

**18. Which wave does not require a medium?**

(a) Sound wave

(b) Light wave

(c) Water wave

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(d) Mechanical wave

✓ Correct Answer: (b) Light wave

**19. The time period of a pendulum depends on:**

(a) Mass of bob

(b) Length of string

(c) Shape of bob

(d) Amplitude

✓ Correct Answer: (b) Length of string

**20. Which physical quantity is measured in Joules?**

(a) Work

(b) Power

(c) Speed

(d) Pressure

✓ Correct Answer: (a) Work

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**21. Density is defined as:**

(a) Mass  $\times$  Volume

(b) Mass  $\div$  Volume

(c) Volume  $\div$  Mass

(d) Mass + Volume

✓ Correct Answer: (b) Mass  $\div$  Volume

**22. Who invented the law of gravitation?**

(a) Einstein

(b) Galileo

(c) Newton

(d) Pascal

✓ Correct Answer: (c) Newton

**23. The speed of sound in air is about:**

(a) 220 m/s

(b) 330 m/s

(c) 440 m/s

(d) 550 m/s

✓ Correct Answer: (b) 330 m/s

**24. SI unit of electric charge is:**

(a) Coulomb

(b) Volt

(c) Ampere

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(d) Ohm

✓ Correct Answer: (a) Coulomb

**25. Which gas is filled in electric bulbs?**

(a) Oxygen

(b) Helium

(c) Nitrogen

(d) Hydrogen

✓ Correct Answer: (c) Nitrogen

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**26. The bending of light when it passes from one medium to another is called:**

(a) Reflection

(b) Refraction

(c) Diffraction

(d) Dispersion

✓ Correct Answer: (b) Refraction

**27. The scientist who discovered radioactivity was:**

(a) Rutherford

(b) Becquerel

(c) Einstein

(d) Bohr

✓ Correct Answer: (b) Becquerel

**28. The SI unit of work is:**

(a) Watt

(b) Joule

(c) Newton

(d) Pascal

✓ Correct Answer: (b) Joule

**29. The device used to convert electrical energy into mechanical energy is:**

(a) Motor

(b) Generator

(c) Transformer

(d) Battery

✓ Correct Answer: (a) Motor

**30. The energy possessed by a body due to its position is called:**

(a) Kinetic energy

(b) Potential energy

(c) Thermal energy

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(d) Electrical energy

✓ Correct Answer: (b) Potential energy

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**31. Which color of light has the shortest wavelength?**

(a) Red

(b) Green

(c) Blue

(d) Violet

✓ Correct Answer: (d) Violet

**32. Which law states “Action and reaction are equal and opposite”?**

(a) Newton’s 1st law

(b) Newton’s 2nd law

(c) Newton’s 3rd law

(d) Law of gravitation

✓ Correct Answer: (c) Newton’s 3rd law

**33. The SI unit of power is:**

(a) Watt

(b) Joule

(c) Newton

(d) Pascal

✓ Correct Answer: (a) Watt

**34. The weakest force in nature is:**

(a) Gravitational force

(b) Electromagnetic force

(c) Nuclear force

(d) Frictional force

✓ Correct Answer: (a) Gravitational force

**35. Which device is used to measure potential difference?**

(a) Ammeter

(b) Voltmeter

(c) Galvanometer

(d) Thermometer

✓ Correct Answer: (b) Voltmeter

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**36. The process of splitting white light into colors is called:**

(a) Reflection

(b) Refraction

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(c) Dispersion

(d) Diffraction

✓ Correct Answer: (c) Dispersion

**37. The unit of velocity is:**

(a)  $\text{m/s}^2$

(b)  $\text{m/s}$

(c) Joule

(d) Newton

✓ Correct Answer: (b)  $\text{m/s}$

**38. Which energy is obtained from sunlight?**

(a) Thermal energy

(b) Solar energy

(c) Electrical energy

(d) Mechanical energy

✓ Correct Answer: (b) Solar energy

**39. The work done is zero when:**

(a) Force is applied

(b) Displacement is zero

(c) Distance is large

(d) Time is large

✓ Correct Answer: (b) Displacement is zero

**40. The unit of electric field is:**

(a) Newton

(b) Volt/meter

(c) Joule

(d) Watt

✓ Correct Answer: (b) Volt/meter

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**41. Ohm's law relates:**

(a) Current and resistance

(b) Voltage and current

(c) Resistance and power

(d) Energy and charge

✓ Correct Answer: (b) Voltage and current

**42. Heat always flows from:**

(a) Cold to hot

(b) Hot to cold



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(c) Lower to higher temperature

(d) Both directions

✓ Correct Answer: (b) Hot to cold

**43. The center of gravity of a uniform sphere is at:**

(a) Top

(b) Bottom

(c) Center

(d) Edge

✓ Correct Answer: (c) Center

**44. The instrument used to measure temperature is:**

(a) Hygrometer

(b) Thermometer

(c) Barometer

(d) Ammeter

✓ Correct Answer: (b) Thermometer

**45. 1 horsepower =**

(a) 746 Watt

(b) 640 Watt

(c) 800 Watt

(d) 1000 Watt

✓ Correct Answer: (a) 746 Watt

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**46. The energy of motion is called:**

(a) Potential energy

(b) Kinetic energy

(c) Mechanical energy

(d) Thermal energy

✓ Correct Answer: (b) Kinetic energy

**47. The value of universal gravitational constant (G) is:**

(a)  $9.8 \text{ m/s}^2$

(b)  $6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$

(c)  $3 \times 10^8 \text{ m/s}$

(d)  $1.6 \times 10^{-19} \text{ C}$

✓ Correct Answer: (b)  $6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$

**48. The unit of capacitance is:**

(a) Ampere

(b) Farad

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(c) Coulomb

(d) Ohm

✓ Correct Answer: (b) Farad

**49. Which law explains why we wear seat belts?**

(a) Newton's 1st law

(b) Newton's 2nd law

(c) Newton's 3rd law

(d) Law of gravitation

✓ Correct Answer: (a) Newton's 1st law

**50. The speed of light in glass is:**

(a) Greater than in vacuum

(b) Equal to in vacuum

(c) Less than in vacuum

(d) Zero

✓ Correct Answer: (c) Less than in vacuum

**51. Which device converts mechanical energy into electrical energy?**

(a) Motor

(b) Generator

(c) Battery

(d) Transformer

✓ Correct Answer: (b) Generator

**52. The unit of work done per unit charge is:**

(a) Ohm

(b) Volt

(c) Watt

(d) Coulomb

✓ Correct Answer: (b) Volt

**53. Which radiation has the highest energy?**

(a) Infrared

(b) X-rays

(c) Gamma rays

(d) Ultraviolet

✓ Correct Answer: (c) Gamma rays

**54. Which law explains the motion of rockets?**

(a) Newton's 1st law

(b) Newton's 2nd law

(c) Newton's 3rd law

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(d) Law of gravitation

✓ Correct Answer: (c) Newton's 3rd law

**55. What is the unit of power in electricity?**

(a) Joule

(b) Newton

(c) Watt

(d) Ohm

✓ Correct Answer: (c) Watt

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**56. The filament of electric bulb is made of:**

(a) Copper

(b) Aluminum

(c) Tungsten

(d) Iron

✓ Correct Answer: (c) Tungsten

**57. The SI unit of momentum is:**

(a) Joule

(b) Newton

(c) Kg·m/s

(d) Watt

✓ Correct Answer: (c) Kg·m/s

**58. Which phenomenon makes stars visible at night?**

(a) Reflection

(b) Refraction

(c) Dispersion

(d) Diffraction

✓ Correct Answer: (b) Refraction

**59. Which form of energy is possessed by stretched spring?**

(a) Kinetic

(b) Potential

(c) Heat

(d) Electrical

✓ Correct Answer: (b) Potential

**60. The rate of change of velocity is called:**

(a) Speed

(b) Acceleration

(c) Momentum

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(d) Force

✓ Correct Answer: (b) Acceleration

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**61. The speed of sound is maximum in:**

(a) Air

(b) Water

(c) Steel

(d) Vacuum

✓ Correct Answer: (c) Steel

**62. The work done when force is perpendicular to displacement is:**

(a) Maximum

(b) Zero

(c) Negative

(d) Infinite

✓ Correct Answer: (b) Zero

**63. Who gave the theory of relativity?**

(a) Newton

(b) Einstein

(c) Galileo

(d) Faraday

✓ Correct Answer: (b) Einstein

**64. Which type of mirror is used in side view mirrors of vehicles?**

(a) Plane

(b) Convex

(c) Concave

(d) Cylindrical

✓ Correct Answer: (b) Convex

**65. The boiling point of water on Celsius scale is:**

(a) 0°C

(b) 50°C

(c) 100°C

(d) 273°C

✓ Correct Answer: (c) 100°C

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**66. Which unit is used to measure frequency of sound?**

(a) Newton

(b) Joule

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- (c) Hertz
- (d) Pascal

✓ Correct Answer: (c) Hertz

**67. The earth completes one rotation in:**

- (a) 12 hours
- (b) 24 hours
- (c) 30 days
- (d) 365 days

✓ Correct Answer: (b) 24 hours

**68. The value of acceleration due to gravity decreases with:**

- (a) Depth
- (b) Height
- (c) Both (a) and (b)
- (d) None

✓ Correct Answer: (c) Both (a) and (b)

**69. The scientist who discovered electron was:**

- (a) Rutherford
- (b) J. J. Thomson
- (c) Einstein
- (d) Bohr

✓ Correct Answer: (b) J. J. Thomson

**70. The phenomenon of rainbow formation is due to:**

- (a) Reflection
- (b) Refraction and dispersion
- (c) Diffraction
- (d) Polarization

✓ Correct Answer: (b) Refraction and dispersion

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**71. The unit of charge is:**

- (a) Volt
- (b) Ampere
- (c) Coulomb
- (d) Ohm

✓ Correct Answer: (c) Coulomb

**72. If no force acts on a body, its momentum:**

- (a) Increases
- (b) Decreases

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- (c) Remains constant
- (d) Becomes zero

✓ Correct Answer: (c) Remains constant

**73. Which wave is used in TV remote controls?**

- (a) Radio waves
- (b) Infrared waves
- (c) Microwaves
- (d) X-rays

✓ Correct Answer: (b) Infrared waves

**74. The SI unit of mechanical work is:**

- (a) Watt
- (b) Joule
- (c) Newton
- (d) Pascal

✓ Correct Answer: (b) Joule

**75. Which of the following is a vector quantity?**

- (a) Mass
- (b) Time
- (c) Force
- (d) Energy

✓ Correct Answer: (c) Force

**76. The energy possessed by water stored at height is:**

- (a) Potential energy
- (b) Kinetic energy
- (c) Chemical energy
- (d) Nuclear energy

✓ Correct Answer: (a) Potential energy

**77. Which type of energy is produced in nuclear fission?**

- (a) Chemical
- (b) Nuclear
- (c) Thermal
- (d) Mechanical

✓ Correct Answer: (b) Nuclear

**78. Which of the following is a good conductor of heat?**

- (a) Wood
- (b) Plastic

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(c) Copper

(d) Rubber

✓ Correct Answer: (c) Copper

**79. The instrument used to measure electric resistance is:**

(a) Ammeter

(b) Voltmeter

(c) Ohmmeter

(d) Galvanometer

✓ Correct Answer: (c) Ohmmeter

**80. Which law explains “Current is directly proportional to voltage”?**

(a) Coulomb’s law

(b) Newton’s law

(c) Ohm’s law

(d) Hooke’s law

✓ Correct Answer: (c) Ohm’s law

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**81. Which is the fastest medium for light?**

(a) Water

(b) Air

(c) Glass

(d) Vacuum

✓ Correct Answer: (d) Vacuum

**82. The unit of torque is:**

(a) Newton-meter

(b) Watt

(c) Joule

(d) Coulomb

✓ Correct Answer: (a) Newton-meter

**83. Which scientist discovered X-rays?**

(a) Becquerel

(b) Roentgen

(c) Newton

(d) Rutherford

✓ Correct Answer: (b) Roentgen

**84. The SI unit of energy is:**

(a) Joule

(b) Newton

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(c) Watt

(d) Volt

✓ Correct Answer: (a) Joule

**85. Which type of current flows in household circuits?**

(a) Direct current

(b) Alternating current

(c) Both (a) and (b)

(d) None

✓ Correct Answer: (b) Alternating current

**86. The process of charging a body without contact is called:**

(a) Conduction

(b) Induction

(c) Convection

(d) Radiation

✓ Correct Answer: (b) Induction

**87. Which gas is responsible for the greenhouse effect?**

(a) Oxygen

(b) Carbon dioxide

(c) Nitrogen

(d) Helium

✓ Correct Answer: (b) Carbon dioxide

**88. Which property of a sound wave determines pitch?**

(a) Amplitude

(b) Frequency

(c) Wavelength

(d) Velocity

✓ Correct Answer: (b) Frequency

**89. Which of the following is an example of renewable energy?**

(a) Coal

(b) Petroleum

(c) Solar energy

(d) Natural gas

✓ Correct Answer: (c) Solar energy

**90. The time taken by light to reach Earth from the Sun is about:**

(a) 8 seconds

(b) 8 minutes



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(c) 8 hours

(d) 8 days

✓ Correct Answer: (b) 8 minutes

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**91. The earth is kept in orbit around the sun due to:**

(a) Magnetic force

(b) Nuclear force

(c) Gravitational force

(d) Electrical force

✓ Correct Answer: (c) Gravitational force

**92. The rate of flow of electric charge is called:**

(a) Voltage

(b) Current

(c) Resistance

(d) Power

✓ Correct Answer: (b) Current

**93. The angle of incidence is equal to:**

(a) Angle of reflection

(b) Angle of refraction

(c) Angle of dispersion

(d) Angle of diffraction

✓ Correct Answer: (a) Angle of reflection

**94. Which instrument is used to detect charge?**

(a) Ammeter

(b) Electroscope

(c) Voltmeter

(d) Galvanometer

✓ Correct Answer: (b) Electroscope

**95. The SI unit of luminous intensity is:**

(a) Candela

(b) Lux

(c) Lumen

(d) Watt

✓ Correct Answer: (a) Candela

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**96. The melting point of ice is:**

(a) 100°C

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- (b)  $0^{\circ}\text{C}$
- (c)  $32^{\circ}\text{C}$
- (d)  $-10^{\circ}\text{C}$

✓ Correct Answer: (b)  $0^{\circ}\text{C}$

**97. The heat required to raise the temperature of 1 kg of a substance by  $1^{\circ}\text{C}$  is called:**

- (a) Latent heat
- (b) Specific heat
- (c) Thermal heat
- (d) Internal heat

✓ Correct Answer: (b) Specific heat

**98. The law of conservation of energy states that:**

- (a) Energy can be created
- (b) Energy can be destroyed
- (c) Energy can neither be created nor destroyed
- (d) Energy is always lost

✓ Correct Answer: (c) Energy can neither be created nor destroyed

**99. Which type of lens is used in magnifying glass?**

- (a) Concave lens
- (b) Convex lens
- (c) Plano-concave lens
- (d) Cylindrical lens

✓ Correct Answer: (b) Convex lens

**100. Which scientist discovered the law of electrolysis?**

- (a) Faraday
- (b) Coulomb
- (c) Newton
- (d) Rutherford

✓ Correct Answer: (a) Faraday

**101. Which instrument is used to measure pressure of gases?**

- (a) Voltmeter
- (b) Manometer
- (c) Ammeter
- (d) Hydrometer

✓ Correct Answer: (b) Manometer

**102. Which form of energy is associated with motion?**

- (a) Potential energy
- (b) Kinetic energy
- (c) Thermal energy

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(d) Nuclear energy

✓ Correct Answer: (b) Kinetic energy

**103. The SI unit of electric field is:**

(a) Newton

(b) Volt/meter

(c) Joule

(d) Ampere

✓ Correct Answer: (b) Volt/meter

**104. The center of mass of a uniform sphere lies at:**

(a) Surface

(b) Center

(c) Axis

(d) Edge

✓ Correct Answer: (b) Center

**105. Which type of current is produced by a battery?**

(a) Direct Current (DC)

(b) Alternating Current (AC)

(c) Pulsating Current

(d) Both AC and DC

✓ Correct Answer: (a) Direct Current (DC)

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**106. The color of sky appears blue due to:**

(a) Refraction

(b) Scattering of light

(c) Dispersion

(d) Diffraction

✓ Correct Answer: (b) Scattering of light

**107. A unit of force is:**

(a) Joule

(b) Newton

(c) Watt

(d) Pascal

✓ Correct Answer: (b) Newton

**108. Which property of light proves its wave nature?**

(a) Diffraction

(b) Photoelectric effect

(c) Compton effect

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(d) Nuclear reaction

✓ Correct Answer: (a) Diffraction

**109. Which scientist discovered the law of gravitation?**

(a) Newton

(b) Galileo

(c) Einstein

(d) Rutherford

✓ Correct Answer: (a) Newton

**110. Which is the unit of capacitance?**

(a) Ohm

(b) Farad

(c) Coulomb

(d) Watt

✓ Correct Answer: (b) Farad

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**111. The instrument used to measure relative humidity is:**

(a) Hygrometer

(b) Manometer

(c) Barometer

(d) Anemometer

✓ Correct Answer: (a) Hygrometer

**112. Which of the following is NOT a vector quantity?**

(a) Force

(b) Velocity

(c) Work

(d) Momentum

✓ Correct Answer: (c) Work

**113. The SI unit of angular velocity is:**

(a) Radian/second

(b) Joule

(c) Hertz

(d) Newton-meter

✓ Correct Answer: (a) Radian/second

**114. The motion of a pendulum is an example of:**

(a) Linear motion

(b) Circular motion

(c) Simple harmonic motion

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(d) Random motion

✓ Correct Answer: (c) Simple harmonic motion

**115. Which electromagnetic wave has the longest wavelength?**

(a) Gamma rays

(b) X-rays

(c) Radio waves

(d) UV rays

✓ Correct Answer: (c) Radio waves

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**116. The device used to step up or step down voltage is:**

(a) Motor

(b) Transformer

(c) Generator

(d) Rectifier

✓ Correct Answer: (b) Transformer

**117. Which is NOT a scalar quantity?**

(a) Distance

(b) Speed

(c) Time

(d) Displacement

✓ Correct Answer: (d) Displacement

**118. The escape velocity on Earth is about:**

(a) 7 km/s

(b) 9.8 km/s

(c) 11.2 km/s

(d) 15 km/s

✓ Correct Answer: (c) 11.2 km/s

**119. The instrument used to measure very small currents is:**

(a) Ammeter

(b) Galvanometer

(c) Voltmeter

(d) Potentiometer

✓ Correct Answer: (b) Galvanometer

**120. The SI unit of pressure is:**

(a) Pascal

(b) Joule

(c) Newton

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(d) Watt

✓ Correct Answer: (a) Pascal

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**121. Which physical quantity is measured in Ohm?**

(a) Resistance

(b) Voltage

(c) Current

(d) Power

✓ Correct Answer: (a) Resistance

**122. The Earth's magnetic field protects us from:**

(a) Earthquakes

(b) Cosmic rays

(c) Infrared rays

(d) Sound waves

✓ Correct Answer: (b) Cosmic rays

**123. A body at rest tends to remain at rest is explained by:**

(a) Newton's 1st law

(b) Newton's 2nd law

(c) Newton's 3rd law

(d) Law of gravitation

✓ Correct Answer: (a) Newton's 1st law

**124. Which device is used to store electric charge?**

(a) Capacitor

(b) Inductor

(c) Resistor

(d) Transformer

✓ Correct Answer: (a) Capacitor

**125. Which color has the shortest wavelength in visible spectrum?**

(a) Red

(b) Blue

(c) Green

(d) Violet

✓ Correct Answer: (d) Violet

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**126. The speed of light is maximum in:**

(a) Glass

(b) Water

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(c) Diamond

(d) Vacuum

✓ Correct Answer: (d) Vacuum

**127. The SI unit of power is:**

(a) Newton

(b) Joule

(c) Watt

(d) Volt

✓ Correct Answer: (c) Watt

**128. Which instrument is used to measure electric current?**

(a) Voltmeter

(b) Ammeter

(c) Galvanometer

(d) Potentiometer

✓ Correct Answer: (b) Ammeter

**129. The rate of change of displacement is called:**

(a) Acceleration

(b) Speed

(c) Velocity

(d) Momentum

✓ Correct Answer: (c) Velocity

**130. Which property of a wave determines its loudness?**

(a) Frequency

(b) Amplitude

(c) Velocity

(d) Wavelength

✓ Correct Answer: (b) Amplitude

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**131. Which law explains the relationship between force, mass, and acceleration?**

(a) Newton's 1st law

(b) Newton's 2nd law

(c) Newton's 3rd law

(d) Law of gravitation

✓ Correct Answer: (b) Newton's 2nd law

**132. Which of the following has no unit?**

(a) Momentum

(b) Work

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(c) Specific gravity

(d) Power

✓ Correct Answer: (c) Specific gravity

**133. The freezing point of pure water is:**

(a)  $-273^{\circ}\text{C}$

(b)  $0^{\circ}\text{C}$

(c)  $32^{\circ}\text{C}$

(d)  $100^{\circ}\text{C}$

✓ Correct Answer: (b)  $0^{\circ}\text{C}$

**134. The property of a body to resist change in motion is called:**

(a) Force

(b) Inertia

(c) Momentum

(d) Acceleration

✓ Correct Answer: (b) Inertia

**135. Which type of mirror is used in shaving mirrors?**

(a) Plane

(b) Convex

(c) Concave

(d) Cylindrical

✓ Correct Answer: (c) Concave

---

**136. The energy stored in a charged capacitor is:**

(a) Mechanical energy

(b) Potential energy

(c) Magnetic energy

(d) Kinetic energy

✓ Correct Answer: (b) Potential energy

**137. The resistance of a conductor depends on:**

(a) Length

(b) Area of cross-section

(c) Temperature

(d) All of the above

✓ Correct Answer: (d) All of the above

**138. Which type of wave requires a medium for propagation?**

(a) Light wave

(b) Sound wave



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(c) Radio wave

(d) Gamma ray

✓ Correct Answer: (b) Sound wave

**139. The unit of frequency is:**

(a) Hertz

(b) Newton

(c) Joule

(d) Watt

✓ Correct Answer: (a) Hertz

**140. Which is the weakest force in nature?**

(a) Gravitational force

(b) Nuclear force

(c) Electromagnetic force

(d) Strong nuclear force

✓ Correct Answer: (a) Gravitational force

---

**141. Which of the following travels fastest?**

(a) Sound in air

(b) Sound in water

(c) Sound in steel

(d) Light in vacuum

✓ Correct Answer: (d) Light in vacuum

**142. The efficiency of an ideal machine is:**

(a) 0%

(b) 50%

(c) 100%

(d) Less than 100%

✓ Correct Answer: (c) 100%

**143. The law of reflection states that:**

(a) Angle of incidence > Angle of reflection

(b) Angle of incidence = Angle of reflection

(c) Angle of incidence < Angle of reflection

(d) None

✓ Correct Answer: (b) Angle of incidence = Angle of reflection

**144. A transformer works on which principle?**

(a) Electrostatics

(b) Electromagnetic induction

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(c) Conservation of energy

(d) Thermodynamics

✓ Correct Answer: (b) Electromagnetic induction

**145. The center-seeking force in circular motion is called:**

(a) Centrifugal force

(b) Centripetal force

(c) Frictional force

(d) Magnetic force

✓ Correct Answer: (b) Centripetal force

---

**146. Which instrument measures atmospheric pressure?**

(a) Manometer

(b) Hygrometer

(c) Barometer

(d) Thermometer

✓ Correct Answer: (c) Barometer

**147. The absolute zero temperature is:**

(a)  $0^{\circ}\text{C}$

(b) 0 K

(c)  $-273^{\circ}\text{C}$

(d) Both (b) and (c)

✓ Correct Answer: (d) Both (b) and (c)

**148. Which law explains "Action and Reaction are equal and opposite"?**

(a) Newton's 1st law

(b) Newton's 2nd law

(c) Newton's 3rd law

(d) Law of gravitation

✓ Correct Answer: (c) Newton's 3rd law

**149. The resistance of a superconductor at very low temperature is:**

(a) Zero

(b) Infinite

(c) Constant

(d) Negative

✓ Correct Answer: (a) Zero

**150. The energy of motion is called:**

(a) Potential energy

(b) Kinetic energy

---

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(c) Thermal energy

(d) Nuclear energy

✓ Correct Answer: (b) Kinetic energy

**151. Which device converts mechanical energy into electrical energy?**

(a) Transformer

(b) Generator

(c) Motor

(d) Battery

✓ Correct Answer: (b) Generator

**152. The force that opposes motion between two surfaces is:**

(a) Centripetal force

(b) Gravitational force

(c) Friction

(d) Magnetic force

✓ Correct Answer: (c) Friction

**153. The unit of work is:**

(a) Newton

(b) Joule

(c) Watt

(d) Pascal

✓ Correct Answer: (b) Joule

**154. What is the main function of fuse in an electric circuit?**

(a) To increase current

(b) To reduce voltage

(c) To protect from excess current

(d) To store charge

✓ Correct Answer: (c) To protect from excess current

**155. Which wave property determines its pitch (sound)?**

(a) Wavelength

(b) Frequency

(c) Amplitude

(d) Speed

✓ Correct Answer: (b) Frequency

---

**156. Which law states that current is directly proportional to voltage?**

(a) Faraday's law

(b) Coulomb's law

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(c) Ohm's law

(d) Newton's law

✓ Correct Answer: (c) Ohm's law

**157. In SI, unit of momentum is:**

(a) Kg·m/s

(b) Joule

(c) Newton

(d) Watt

✓ Correct Answer: (a) Kg·m/s

**158. The path of a projectile is:**

(a) Circular

(b) Straight line

(c) Parabolic

(d) Elliptical

✓ Correct Answer: (c) Parabolic

**159. The phenomenon of bending of light when it enters from one medium to another is:**

(a) Reflection

(b) Refraction

(c) Diffraction

(d) Dispersion

✓ Correct Answer: (b) Refraction

**160. The speed of sound in air at room temperature is about:**

(a) 220 m/s

(b) 330 m/s

(c) 440 m/s

(d) 500 m/s

✓ Correct Answer: (b) 330 m/s

---

**161. Which device is used to measure potential difference?**

(a) Ammeter

(b) Voltmeter

(c) Galvanometer

(d) Wattmeter

✓ Correct Answer: (b) Voltmeter

**162. The SI unit of electric charge is:**

(a) Volt

(b) Coulomb

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(c) Farad

(d) Joule

✓ Correct Answer: (b) Coulomb

**163. A freely suspended magnet always points towards:**

(a) North-South direction

(b) East-West direction

(c) Random direction

(d) Vertical direction

✓ Correct Answer: (a) North-South direction

**164. The image formed by a plane mirror is always:**

(a) Real and inverted

(b) Virtual and erect

(c) Enlarged and real

(d) Diminished and inverted

✓ Correct Answer: (b) Virtual and erect

**165. The energy obtained from nucleus of atom is called:**

(a) Thermal energy

(b) Nuclear energy

(c) Kinetic energy

(d) Potential energy

✓ Correct Answer: (b) Nuclear energy

---

**166. The value of acceleration due to gravity on Earth is:**

(a)  $8.9 \text{ m/s}^2$

(b)  $9.8 \text{ m/s}^2$

(c)  $10.8 \text{ m/s}^2$

(d)  $11.2 \text{ m/s}^2$

✓ Correct Answer: (b)  $9.8 \text{ m/s}^2$

**167. Which of the following is a non-renewable source of energy?**

(a) Solar energy

(b) Coal

(c) Wind energy

(d) Hydro power

✓ Correct Answer: (b) Coal

**168. The process of converting liquid into gas at any temperature is:**

(a) Condensation

(b) Evaporation

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(c) Freezing

(d) Sublimation

✓ Correct Answer: (b) Evaporation

**169. The SI unit of torque is:**

(a) Newton

(b) Newton-meter

(c) Joule

(d) Watt

✓ Correct Answer: (b) Newton-meter

**170. The resistance of a wire depends on its:**

(a) Length

(b) Area of cross-section

(c) Material

(d) All of the above

✓ Correct Answer: (d) All of the above

---

**171. The device used to convert AC into DC is:**

(a) Transformer

(b) Rectifier

(c) Inductor

(d) Capacitor

✓ Correct Answer: (b) Rectifier

**172. Which is the unit of gravitational constant (G)?**

(a)  $\text{N}\cdot\text{m}^2/\text{kg}^2$

(b)  $\text{N}/\text{kg}$

(c)  $\text{J}/\text{kg}$

(d)  $\text{m}/\text{s}^2$

✓ Correct Answer: (a)  $\text{N}\cdot\text{m}^2/\text{kg}^2$

**173. The force which keeps planets in orbit around the Sun is:**

(a) Electromagnetic force

(b) Gravitational force

(c) Nuclear force

(d) Frictional force

✓ Correct Answer: (b) Gravitational force

**174. Which type of lens is used in magnifying glass?**

(a) Convex lens

(b) Concave lens

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(c) Cylindrical lens

(d) Plane lens

✓ Correct Answer: (a) Convex lens

**175. The device which converts electrical energy into mechanical energy is:**

(a) Transformer

(b) Generator

(c) Motor

(d) Inductor

✓ Correct Answer: (c) Motor

---

**176. The boiling point of water at sea level is:**

(a) 0°C

(b) 50°C

(c) 100°C

(d) 120°C

✓ Correct Answer: (c) 100°C

**177. The bending of a straw in water is due to:**

(a) Reflection

(b) Refraction

(c) Diffraction

(d) Interference

✓ Correct Answer: (b) Refraction

**178. The unit of electric power is:**

(a) Coulomb

(b) Watt

(c) Volt

(d) Ampere

✓ Correct Answer: (b) Watt

**179. Which property of sound determines its quality?**

(a) Frequency

(b) Amplitude

(c) Waveform

(d) Velocity

✓ Correct Answer: (c) Waveform

**180. A body moving in a circle experiences:**

(a) Centrifugal force

(b) Centripetal force

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- (c) Magnetic force
  - (d) Gravitational force
  - ✓ Correct Answer: (b) Centripetal force
- 

**181. Which scientist proposed the theory of relativity?**

- (a) Newton
- (b) Einstein
- (c) Galileo
- (d) Rutherford
- ✓ Correct Answer: (b) Einstein

**182. The energy possessed by a stretched spring is:**

- (a) Kinetic energy
- (b) Potential energy
- (c) Nuclear energy
- (d) Thermal energy
- ✓ Correct Answer: (b) Potential energy

**183. Which is the unit of frequency?**

- (a) Watt
- (b) Newton
- (c) Hertz
- (d) Joule
- ✓ Correct Answer: (c) Hertz

**184. The time taken to complete one vibration is called:**

- (a) Frequency
- (b) Time period
- (c) Amplitude
- (d) Waveform
- ✓ Correct Answer: (b) Time period

**185. Which instrument measures current strength?**

- (a) Voltmeter
  - (b) Ammeter
  - (c) Thermometer
  - (d) Galvanometer
  - ✓ Correct Answer: (b) Ammeter
- 

**186. Which type of mirror is used in vehicles for wide view?**

- (a) Concave



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- (b) Convex
- (c) Plane
- (d) Cylindrical

✓ Correct Answer: (b) Convex

**187. Which energy source is renewable?**

- (a) Oil
- (b) Gas
- (c) Solar
- (d) Coal

✓ Correct Answer: (c) Solar

**188. The SI unit of density is:**

- (a)  $\text{Kg/m}^2$
- (b)  $\text{Kg/m}^3$
- (c)  $\text{g/cm}^2$
- (d)  $\text{g/cm}^3$

✓ Correct Answer: (b)  $\text{Kg/m}^3$

**189. Which form of energy is produced due to vibration of particles?**

- (a) Light energy
- (b) Sound energy
- (c) Thermal energy
- (d) Nuclear energy

✓ Correct Answer: (b) Sound energy

**190. The instrument used to measure temperature is:**

- (a) Barometer
- (b) Thermometer
- (c) Hygrometer
- (d) Voltmeter

✓ Correct Answer: (b) Thermometer

**191. The acceleration produced in a body is directly proportional to:**

- (a) Force applied
- (b) Mass of body
- (c) Velocity of body
- (d) Distance travelled

✓ Correct Answer: (a) Force applied

**192. The SI unit of energy is:**

- (a) Joule

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- (b) Newton
- (c) Watt
- (d) Pascal

✓ Correct Answer: (a) Joule

**193. Which of the following is a good conductor of electricity?**

- (a) Wood
- (b) Plastic
- (c) Copper
- (d) Rubber

✓ Correct Answer: (c) Copper

**194. Which is the fastest medium for sound travel?**

- (a) Air
- (b) Water
- (c) Steel
- (d) Vacuum

✓ Correct Answer: (c) Steel

**195. The unit of electric resistance is:**

- (a) Ampere
- (b) Ohm
- (c) Watt
- (d) Volt

✓ Correct Answer: (b) Ohm

---

**196. The process of changing solid directly into gas is:**

- (a) Fusion
- (b) Sublimation
- (c) Vaporization
- (d) Condensation

✓ Correct Answer: (b) Sublimation

**197. Which type of current changes direction continuously?**

- (a) Direct Current (DC)
- (b) Alternating Current (AC)
- (c) Pulsating Current
- (d) Static Current

✓ Correct Answer: (b) Alternating Current (AC)

**198. The image formed by a convex lens can be:**

- (a) Only real

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- (b) Only virtual
- (c) Both real and virtual
- (d) Only inverted

✓ Correct Answer: (c) Both real and virtual

**199. The scientist who discovered electron is:**

- (a) J.J. Thomson
- (b) Rutherford
- (c) Bohr
- (d) Einstein

✓ Correct Answer: (a) J.J. Thomson

**200. The property of a body to remain in uniform motion is called:**

- (a) Force
- (b) Inertia
- (c) Acceleration
- (d) Energy

✓ Correct Answer: (b) Inertia

**201. The SI unit of power is:**

- (a) Newton
- (b) Joule
- (c) Watt
- (d) Coulomb

✓ Correct Answer: (c) Watt

**202. The phenomenon of rainbow formation is due to:**

- (a) Reflection
- (b) Refraction & dispersion
- (c) Diffraction
- (d) Scattering

✓ Correct Answer: (b) Refraction & dispersion

**203. The time rate of change of velocity is called:**

- (a) Speed
- (b) Acceleration
- (c) Displacement
- (d) Momentum

✓ Correct Answer: (b) Acceleration

**204. Which law is also known as the law of inertia?**

- (a) Newton's 1st law
- (b) Newton's 2nd law
- (c) Newton's 3rd law

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(d) Law of gravitation

✓ Correct Answer: (a) Newton's 1st law

**205. Which mirror always forms a virtual and diminished image?**

(a) Plane

(b) Convex

(c) Concave

(d) Parabolic

✓ Correct Answer: (b) Convex

---

**206. The unit of electric field is:**

(a) N/C

(b) J/C

(c) Volt

(d) Ampere

✓ Correct Answer: (a) N/C

**207. What type of quantity is pressure?**

(a) Scalar

(b) Vector

(c) Tensor

(d) None

✓ Correct Answer: (a) Scalar

**208. The energy due to position of a body is called:**

(a) Kinetic energy

(b) Potential energy

(c) Thermal energy

(d) Work

✓ Correct Answer: (b) Potential energy

**209. Which device is used to detect current in a circuit?**

(a) Ammeter

(b) Galvanometer

(c) Voltmeter

(d) Multimeter

✓ Correct Answer: (b) Galvanometer

**210. Which waves are used in radar?**

(a) Infrared rays

(b) Microwaves

(c) UV rays

(d) X-rays

✓ Correct Answer: (b) Microwaves

---

**211. The SI unit of luminous intensity is:**

(a) Candela

(b) Lux

(c) Watt

(d) Lumen

✓ Correct Answer: (a) Candela

**212. The velocity-time graph of uniform motion is a:**

(a) Curve

(b) Horizontal line

(c) Vertical line

(d) Straight line

✓ Correct Answer: (d) Straight line

**213. The rate of doing work is called:**

(a) Energy

(b) Force

(c) Power

(d) Momentum

✓ Correct Answer: (c) Power

**214. A device that converts sound energy into electrical energy is:**

(a) Speaker

(b) Microphone

(c) Motor

(d) Transformer

✓ Correct Answer: (b) Microphone

**215. The upward force acting on a body immersed in fluid is called:**

(a) Friction

(b) Buoyant force

(c) Normal force

(d) Tension

✓ Correct Answer: (b) Buoyant force

---

**216. A short-sighted eye is corrected by which lens?**

(a) Convex

(b) Concave

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- (c) Cylindrical
- (d) Plano-convex

✓ Correct Answer: (b) Concave

**217. The SI unit of pressure is equal to:**

- (a) N/m
- (b) N/m<sup>2</sup>
- (c) J/m<sup>3</sup>
- (d) kg/m<sup>2</sup>

✓ Correct Answer: (b) N/m<sup>2</sup>

**218. The phenomenon used in optical fibers is:**

- (a) Reflection
- (b) Refraction
- (c) Total internal reflection
- (d) Diffraction

✓ Correct Answer: (c) Total internal reflection

**219. The process of charging a body without contact is called:**

- (a) Conduction
- (b) Induction
- (c) Convection
- (d) Radiation

✓ Correct Answer: (b) Induction

**220. Which type of motion is Earth's rotation on its axis?**

- (a) Linear motion
- (b) Circular motion
- (c) Rotational motion
- (d) Random motion

✓ Correct Answer: (c) Rotational motion

---

**221. The work done in moving a charge between two points in an electric field depends on:**

- (a) Path taken
- (b) Distance
- (c) Potential difference
- (d) Velocity

✓ Correct Answer: (c) Potential difference

**222. Which radiation has highest energy?**

- (a) X-rays

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- (b) UV rays
- (c) Gamma rays
- (d) Infrared rays

✓ Correct Answer: (c) Gamma rays

**223. The unit of magnetic flux is:**

- (a) Tesla
- (b) Weber
- (c) Gauss
- (d) Henry

✓ Correct Answer: (b) Weber

**224. Which property of a conductor opposes current flow?**

- (a) Resistance
- (b) Inductance
- (c) Capacitance
- (d) Conductance

✓ Correct Answer: (a) Resistance

**225. The acceleration of free fall is maximum on:**

- (a) Equator
- (b) Poles
- (c) Both same
- (d) Oceans

✓ Correct Answer: (b) Poles

**226. The sound cannot travel through:**

- (a) Solid
- (b) Liquid
- (c) Gas
- (d) Vacuum

✓ Correct Answer: (d) Vacuum

**227. The device used for converting sound to electrical signals in telephone is:**

- (a) Speaker
- (b) Microphone
- (c) Receiver
- (d) Amplifier

✓ Correct Answer: (b) Microphone

**228. What is the unit of force constant (spring)?**

- (a) N/m

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(b)  $\text{N/m}^2$

(c)  $\text{J/m}$

(d) Watt

✓ Correct Answer: (a)  $\text{N/m}$

**229. Which instrument is used to measure voltage?**

(a) Ammeter

(b) Voltmeter

(c) Galvanometer

(d) Potentiometer

✓ Correct Answer: (b) Voltmeter

**230. Which law states that volume of a gas is inversely proportional to its pressure?**

(a) Charles's law

(b) Boyle's law

(c) Ohm's law

(d) Hooke's law

✓ Correct Answer: (b) Boyle's law

---

**231. What is the unit of gravitational potential energy?**

(a) Joule

(b) Watt

(c) Newton

(d) Pascal

✓ Correct Answer: (a) Joule

**232. Which type of current flows in household electricity?**

(a) AC

(b) DC

(c) Both AC & DC

(d) Static current

✓ Correct Answer: (a) AC

**233. The minimum velocity required to put satellite in orbit is:**

(a)  $5 \text{ km/s}$

(b)  $7.9 \text{ km/s}$

(c)  $11.2 \text{ km/s}$

(d)  $13 \text{ km/s}$

✓ Correct Answer: (b)  $7.9 \text{ km/s}$

**234. Which law explains electromagnetic induction?**

(a) Newton's law



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- (b) Faraday's law
- (c) Coulomb's law
- (d) Ampere's law

✓ Correct Answer: (b) Faraday's law

**235. What is the energy source of the Sun?**

- (a) Nuclear fission
- (b) Nuclear fusion
- (c) Chemical reaction
- (d) Combustion

✓ Correct Answer: (b) Nuclear fusion

**236. The time taken by light to travel from Sun to Earth is about:**

- (a) 1 second
- (b) 8 minutes
- (c) 1 hour
- (d) 24 hours

✓ Correct Answer: (b) 8 minutes

**237. The force which opposes relative motion of fluid layers is:**

- (a) Friction
- (b) Viscous force
- (c) Buoyant force
- (d) Tension

✓ Correct Answer: (b) Viscous force

**238. The unit of work done per unit charge is:**

- (a) Joule
- (b) Volt
- (c) Coulomb
- (d) Watt

✓ Correct Answer: (b) Volt

**239. Which type of mirror is used in car headlights?**

- (a) Plane
- (b) Concave
- (c) Convex
- (d) Cylindrical

✓ Correct Answer: (b) Concave

**240. The SI unit of inductance is:**

- (a) Henry

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- (b) Weber
- (c) Tesla
- (d) Joule

✓ Correct Answer: (a) Henry

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**241. The device used to convert electrical energy into sound energy is:**

- (a) Microphone
- (b) Speaker
- (c) Generator
- (d) Transformer

✓ Correct Answer: (b) Speaker

**242. The velocity of light in glass is:**

- (a) Greater than in vacuum
- (b) Less than in vacuum
- (c) Equal to in vacuum
- (d) Zero

✓ Correct Answer: (b) Less than in vacuum

**243. The capacity of doing work is called:**

- (a) Force
- (b) Energy
- (c) Power
- (d) Momentum

✓ Correct Answer: (b) Energy

**244. Which instrument measures electric resistance?**

- (a) Voltmeter
- (b) Ohmmeter
- (c) Ammeter
- (d) Multimeter

✓ Correct Answer: (b) Ohmmeter

**245. The bending of light around obstacles is called:**

- (a) Reflection
- (b) Refraction
- (c) Diffraction
- (d) Scattering

✓ Correct Answer: (c) Diffraction

---

**246. The acceleration due to gravity on Moon is about:**

- (a)  $9.8 \text{ m/s}^2$
- (b)  $5.8 \text{ m/s}^2$
- (c)  $1.6 \text{ m/s}^2$
- (d)  $11.2 \text{ m/s}^2$

✓ Correct Answer: (c)  $1.6 \text{ m/s}^2$

**247. Which color of light has maximum wavelength?**

- (a) Blue
- (b) Green
- (c) Red
- (d) Violet

✓ Correct Answer: (c) Red

**248. A device that stores magnetic energy is called:**

- (a) Capacitor
- (b) Inductor
- (c) Transformer
- (d) Resistor

✓ Correct Answer: (b) Inductor

**249. The change of frequency of sound due to motion is called:**

- (a) Doppler effect
- (b) Refraction
- (c) Diffraction
- (d) Interference

✓ Correct Answer: (a) Doppler effect

**250. Which law is related to stretching of spring?**

- (a) Ohm's law
- (b) Hooke's law
- (c) Boyle's law
- (d) Newton's law

✓ Correct Answer: (b) Hooke's law