

Multiple Choice Questions

- Which of the following devices can be used to produce both a transverse and longitudinal wave?
 - A STRING
 - A RIPPLE TANK
 - A HELICAL SPRING
 - A TUNING FORK
- Which of the following is a method of energy transfer
 - conduction
 - radiation
 - wave motion
 - all of the above
- In a vacuum all electromagnetic waves have the same
 - Speed
 - Frequency
 - Amplitude
 - Wavelength
- Which of the following characteristics of wave is independent of the other
 - Speed
 - Frequency
 - Amplitude
 - Wavelength
- Time to complete one vibration is
 - Time period
 - Amplitude
 - Frequency
 - None
- Which form of the energy is sound
 - Electrical
 - Mechanical
 - Thermal
 - Chemical
- Intensity level of the mosquito buzzing is
 - 70dB
 - 40DB
 - 10DB
 - 0DB
- What is the unit of intensity of sound
 - Ms^{-1}
 - Decibel
 - Wm^{-2}
 - None
- Which of the following requires a medium for its propagation
 - Heat
 - Light
 - Sound
 - None
- A converging mirror with a radius of 20 cm creates a real image 30 cm from the mirror that is the object distance
 - 20 cm
 - 15 cm
 - 7.5 cm
 - 5.0 cm
- A large ripple tank with a vibrator working at a frequency of 30 Hz produces 25 complete waves in a distance of 50 cm. The velocity of the waves is
 - 60 cm^{-1}
 - $5/3 \text{ cms}^{-1}$
 - 750 cm^{-1}
 - 1500 cms^{-1}
- Which is the example of a longitudinal wave
 - Sound wave
 - Light wave
 - Radio wave
 - Water wave
- Which type of the image is formed by a concave lens on a screen
 - Inverted and real
 - Inverted and virtual
 - Upright and real
 - Upright and virtual
- If a ray of light glass is incident on an air surface at an angle greater than the critical angle, the ray will
 - Refract only
 - Reflect only
 - Partially refract and partially reflect
 - Diffract
- How many kinds of mirror are there
 - 4
 - 3
 - 2
 - 5
- Which of the following used as in automobiles and motor cycles
 - Convex lens
 - Concave mirrors
 - Concave lenses
 - Convex mirrors
- What is the speed of light in water is
 - $2.3 \times 10^8 \text{ ms}^{-1}$
 - $3 \times 10^8 \text{ ms}^{-1}$
 - $2 \times 10^8 \text{ ms}^{-1}$
 - $3 \times 10 \text{ ms}^{-1}$
- A positive electric charge
 - Attracts other positive charge
 - Repels other positive charge
 - Attracts a neutral charge
 - Repels a neutral charge
- Capacitance is defined as
 - VC
 - Q/V
 - QV
 - V/Q
- The instrument which is used for testing the nature of charge is
 - Stroboscope
 - Electroscope
 - Spectroscope
 - Microscopes
- An electric current in conductors is due to flow of
 - Positive ions
 - Negative ions
 - Free electrons
 - None
- What happens to the intensity or the brightness of the lamps connected in series as more and more lamps are added
 - Increases
 - Decreases
 - Remains the same
 - Cannot be predicted
- Electric potential and EMF
 - Are the same terms
 - Are the different terms
 - Have different units
 - None
- When we double the voltage in simple electric circuit, we double the
 - Current
 - Power
 - Resistance
 - Current and power
- What is the of resistance
 - Ohm
 - Coulomb
 - Ampere
 - Volt
- What is the power rating of a lamp connected to a 12-V source when it carries 2.5 A
 - 4.8W
 - 14.5W
 - 30W
 - 60W
- Which statement is true about the magnetic poles
 - Opposite poles repel
 - Like poles attract
 - Magnetic poles do not effect each other
 - A single magnetic pole does not exist
- What is the direction of the magnetic field lines inside a bar magnet
 - From north pole to south pole
 - From south pole to north pole
 - From side to side
 - There are not magnetic field lines
- The direction of induced e.m.f. in a circuit in accordance with conservation of
 - Mass
 - Charge
 - Momentum
 - Energy
- The turn ratios of a transformer are 10. It means
 - $I_s = 10 I_p$
 - $N_s = N_p / 10$
 - $N_s = 10 N_p$
 - $V_s = V_p / 10$
- The particles emitted from a hot cathode surface are
 - Positive ions
 - Negative ions
 - Protons
 - Electrons
- AND gate can be formed by using two
 - NOT gates
 - OR gates
 - NOR gates
 - OR gates
- The brain of any computer system is
 - Monitor
 - Memory
 - CPU
 - Control Unit
- Which of the following is not processing
 - Arranging
 - Manipulating
 - Calculating
 - Gathering
- Main parts of oscilloscope are
 - 2
 - 3
 - 4
 - 5
- Release of energy by Sun is due to
 - Nuclear fission
 - Nuclear fusion
 - Burning of gases
 - Chemical reaction
- Which element has least half-life
 - Carbon
 - Hydrogen
 - Polonium
 - Cobalt
- What kind of charges does a nucleus carry
 - No charge
 - Neutral
 - Negative
 - Positive
- One of the isotopes uranium is $^{238}_{92}\text{U}$. The number of neutrons in this isotope is
 - 238
 - 92
 - 330
 - 146
- When J.J. Thomas observed cathode rays deflection
 - 1850
 - 1897
 - 1890
 - 1950