

Examrace

Important Questions in Physics Based on Optics, Sound, Mechanics and Nuclear Physics

Glide to success with Doorsteptutor material for competitive exams : [get questions, notes, tests, video lectures and more](#)- for all subjects of your exam.

Q. When a guitar string is sounded with a 440 Hz tuning fork a beat frequency of 5 Hz is heard if the experiment is repeated with a tuning fork of 437 Hz the beat frequency is 8 Hz. The string frequency (Hz) is –

[AIIMS-2006]

- (a) 445
- (b) 435
- (c) 429
- (d) 448

Q. What is your observation when two source are emitting sound with frequency 499 Hz & 501 Hz: [AIIMS 2011]

- (a) Frequency of 500 Hz is heard with change in intensity takes place twice.
- (b) Frequency of 500 Hz is heard with change in intensity takes place once.
- (c) Frequency of 2Hz is heard with change in intensity takes place once.
- (d) Frequency of 2Hz is heard with change in intensity takes place twice.

Q. A compass needle will show which of the following directions at the earth's magnetic pole [AIIMS 1996]

- (a) No particular direction
- (b) Bent at 45° to the vertical
- (c) horizontal
- (d) vertical

Q. The north pole of the earth's magnet is near the geographical:

[AIIMS 1996]

- (a) East pole
- (b) West pole
- (c) North pole

(d) South pole

Q. An electric bulb in series with a large inductor when connected across a DC source take a little time before reaching a stable glow. If an iron core is inserted to the inductor, the delay will –

[AIIMS1994]

(a) increases

(b) decreases

(c) remain the same

(d) may change in either direction depending upon the values of inductance and resistance

Q. The device that does not work on the principle of mutual induction is –

(a) motor

(b) tesla coil

(c) transformer

(d) induction coil

Q. If a transparent medium of refractive index $\mu = 1.5$ and thickness $t = 2.5 \times 10^{-5} m$ is inserted in front of the slits of Young's Double slit experiment, how much will be the shift in the interference pattern? The distance between the slits is 0.5 mm and that between slits and screen is 100 cm – [AIIMS 1999]

(a) 5 cm

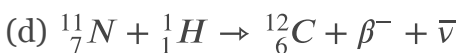
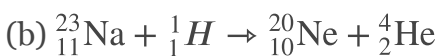
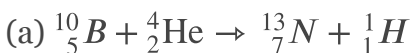
(b) 2.5 cm

(c) 0.25 cm

(d) 0.1 cm

Q. Which one of the following is a possible nuclear reaction – ?

[AIIMS 2006]



Q. Direction of electric field in P-N Junction diode is –

[AIIMS 2011]

- (a) From P side to N-side
- (b) From N side to P-side
- (c) Randomly oriented
- (d) Electric field does not exist

Q. The intensity of sound increases at night due to –

[AIIMS-1998]

- (a) increase in density of air
- (b) decrease in density of air
- (c) low temperature
- (d) high temperature

Q. Newton's formula for the velocity of sound in gases is –

[AIIMS – 1998]

(a) $v = \sqrt{\frac{2p}{\rho}}$

(b) $v = \sqrt{\frac{p}{\rho}}$

(c) $v = \sqrt{\frac{\rho}{p}}$

(d) $v = \frac{3}{2} \sqrt{\frac{p}{\rho}}$

Q. Energy is not carried by which of the following waves?

[AIIMS-1999]

- (a) Stationary
- (b) transverse
- (c) Progressive
- (d) electromagnetic

Q. Two waves are said to be coherent, if they have

[AIIMS-2000]

- (a) different frequency but different amplitude
- (b) same phase and different amplitudes
- (c) same frequency, phase and amplitudes
- (d) different frequency, phase and amplitudes

Developed by: [Mindsprite Solutions](#)