

NEET WAVES — SPEED OF A TRAVELLING WAVE (STRING, SOUND) — PYQS

Max. Marks: 16
Questions: 4

Section A (MCQ) — 4 questions

- Q.1** If the initial tension on a stretched string is doubled, then the ratio of the initial and final speeds of a transverse wave along the string is

[NEET (UG) 2022]

- (1) 1:1 (2) $\sqrt{2}:1$ (3) $1:\sqrt{2}$ (4) 1:2

Scan or tap for the full solution



- Q.2** A uniform rope of length L and mass m_1 hangs vertically from a rigid support. A block of mass m_2 is attached to the free end of the rope. A transverse pulse of wavelength λ_1 is produced at the lower end of the rope. The wavelength of the pulse when it reaches the top of the rope is λ_2 . The ratio λ_2/λ_1 is

[NEET 2016 (Phase 1)]

- (1) $\sqrt{\frac{m_2}{m_1}}$ (2) $\sqrt{\frac{m_1 + m_2}{m_1}}$
 (3) $\sqrt{\frac{m_1}{m_2}}$ (4) $\sqrt{\frac{m_1 + m_2}{m_2}}$

Scan or tap for the full solution



- Q.3** Sound waves travel at 350 m/s through warm air and at 3500 m/s through brass. The wavelength of a 700 Hz acoustic wave as it enters brass from warm air

[AIPMT 2011 (Prelims)]

- (1) decrease by a factor 10
 (2) increase by a factor 20
 (3) increase by a factor 10
 (4) decrease by a factor 20

Scan or tap for the full solution



- Q.4** A point source emits sound equally in all directions in a non-absorbing medium. Two points P and Q are at distances of 2 m and 3 m respectively from the source. The ratio of the intensities of the waves at P and Q is

[AIPMT 2005]

- (1) 3 : 2 (2) 2 : 3 (3) 9 : 4 (4) 4 : 9

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4											
Ans.	3	4	3	3											