

Waves

NEET previous year questions · Physics

3 questions from the official papers: NEET 2026 (1), Re-NEET 2026 (1), NEET 2020 (1). Each is followed by its answer and a worked solution written by BrainIt. Generated on 23 October 2026.



BrainIt

The NEET practice app that learns how you practise and tells you what to do next.

PYQs · Mock tests · Revision · Interactive 3D concepts · Analytics

Get it on
Google Play

Download on the
App Store



brainit.pro/app

1. NEET 2026 · Q21

For a travelling harmonic wave $y(x, t) = 2.0 \cos 2\pi(10t - 0.0080x + 0.35)$, where x and y are in cm and t in s, the phase difference between oscillatory motion of two points separated by a distance of 0.5 m is:

- (1) 0.08π rad (2) 0.8π rad
(3) 8π rad (4) 0.008π rad

Answer (2)

Sol. The spatial part of the phase is $2\pi(0.0080)x$ with x in cm, so the wave number term gives phase difference $\Delta\phi = 2\pi(0.0080) \Delta x$. Converting the separation to centimetres, $\Delta x = 0.5 \text{ m} = 50 \text{ cm}$, so $\Delta\phi = 2\pi \times 0.0080 \times 50 = 0.8\pi$ rad (option (2)). The wrong answers arise from failing to convert 0.5 m into 50 cm.

2. Re-NEET 2026 · Q4

For sound waves, if the number of nodes for the 5th harmonic of an open-ended pipe is n and that for the 9th harmonic of the same pipe with one of its ends closed is m , the ratio $\frac{n}{m}$ is

- (1) $\frac{5}{9}$ (2) $\frac{9}{5}$ (3) 1 (4) $\frac{3}{5}$

Answer (3)

Sol. An open-open pipe has antinodes at both ends, and its p -th harmonic contains exactly p nodes, so the 5th harmonic gives $n = 5$. A closed pipe supports only odd harmonics, with a node at the closed end and an antinode at the open end; its q -th harmonic (q odd) contains $\frac{q+1}{2}$ nodes, so the 9th harmonic gives $m = \frac{10}{2} = 5$. The ratio is therefore 1. NCERT Class 11, Waves (standing waves in air columns).

3. NEET 2020 · Q161

In a guitar, two strings A and B made of the same material are slightly out of tune and produce beats of frequency 6 Hz. When tension in B is slightly decreased, the beat frequency increases to 7 Hz. If the frequency of A is 530 Hz, the original frequency of B will be

- (1) 524 Hz (2) 536 Hz (3) 537 Hz (4) 523 Hz

Answer (1)

Sol. Initially $|f_B - 530| = 6$. Decreasing B's tension lowers f_B ; because the beat frequency then increases, B was already below 530 Hz. Thus $f_B = 530 - 6 = 524$ Hz.
Chapter: Waves.

Questions: official NEET papers set by NTA. Solutions: BrainIt. BrainIt is independent and not affiliated with NTA. Online, with every chapter:
brainit.pro/neet/physics/waves/pyq/

AFTER THIS PAPER

Turn this paper into a plan.

BrainIt is a NEET practice app. It learns how you practise and tells you what to do next.

- **PYQs**
Previous-year questions, each with an explanation.
- **Mock tests**
Full and mini mocks on the CBT exam screen.
- **Revision**
Your mistakes come back for review, with flashcards.
- **Interactive concepts**
Learn by exploring 3D models, like the human body and the heart.
- **Analytics**
See your accuracy, speed and where you lose marks.
- **A daily plan**
It picks what to study next, every day.

Get it on

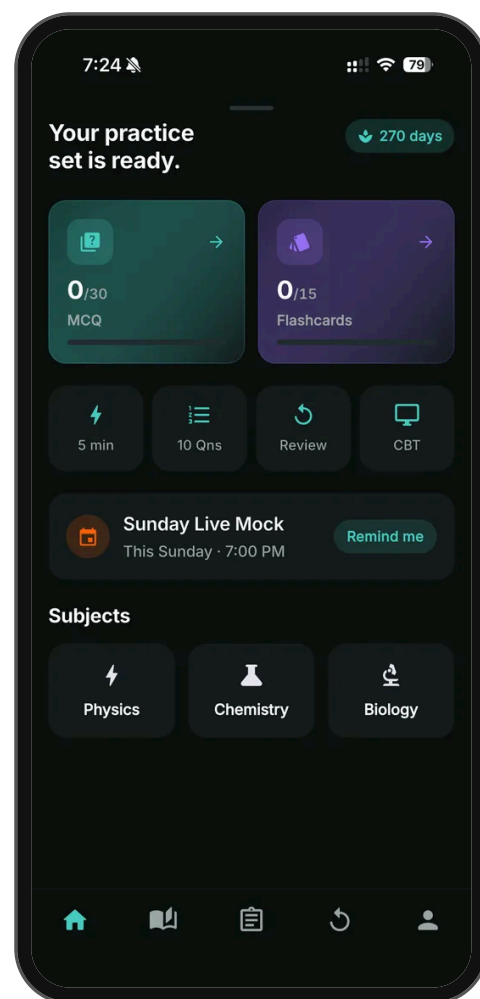
Google Play

Download on the

App Store



Scan with your phone camera,
or type **brainit.pro/app**



Take a free CBT mock

Real NEET questions on the exam screen, timed and marked for you.
No login.