

Anjuman Islam Janjira Degree College of Science
Murud-Janjira, Raigad-402401
Affiliated to University of Mumbai

As per NEP 2020

Class: -S.Y.B.Sc.	Subject: - Physics Minor Course-2
Semester: - IV	Course code: -
Exam Event: - Summer 2026 (FH)	Marks: - 30
Date: - 07/03/2026	Duration: - 1:00 Hours

N.B.

- 1. All questions are compulsory.**
- 2. Figures to the right indicate full marks.**
- 3. Draw neat labelled diagrams wherever necessary.**



Q: 1 A) Attempt any TWO of the following.

(10)

1. What is wave? Explain different types of waves.
2. Derive the equation of simple harmonic wave.
3. Formulate the Laplace correction for equation of velocity of sound.
4. Derive the equation of energy of progressive wave.

Q: 1 B) Attempt any ONE of the following.

(05)

1. If the frequency of tuning fork is 512Hz and the velocity of sound in air is 320 m/s, find how far sound travels while the fork completes 20 vibrations.
2. The velocity of sound in air at 24°C is 330 m/s. What will be its velocity when pressure of gas is doubled and its temperature increase to 187°C.

Q: 2 A) Attempt any TWO of the following.

(10)

1. Derive the energy of stationary wave.
2. Write the laws of transverse vibration of string.
3. Derive the Sabine's formula for reverberation time.
4. Discuss any five methods for designing a good auditorium.

Q: 2 B) Attempt any ONE of the following.

(05)

1. A note produces four beats per second with a tuning fork of frequency 51 Hz and 6 beats per second with a tuning fork of frequency 514 Hz. Find the frequency of note.
2. For an empty Assembly hall of size 20 x 15 x 10 cubic meter with absorption coefficient 0.106 calculate reverberation time.