This question paper contains **2** printed pages]

GA—42—2023

FACULTY OF SCIENCE

B.Sc. (Second Year) (Third Semester) EXAMINATION
APRIL/MAY, 2023

(New Course)

PHYSICS

Paper VI

(Waves and Oscillations)

(Friday, 28-4-2023)   **Time : 2.00 p.m. to 4.00 p.m.**

Time— Two Hours   *Maximum Marks*—40

N.B. :—*All* questions are compulsory.

1. Explain in detail analytical treatment of stationary waves for closed and organ pipe.   15

Or

(*a*) Explain wave velocity and particle velocity.   8

(*b*) Explain equation of motion of vibrating string.   7

2. Obtain general solution of a forced vibration and discuss sharpness of resonance.   15

Or

(*a*) Explain conditions for good acoustical designs of an auditorium.   8

(*b*) Explain magnetostriction oscillator.   7

P.T.O.

3. Write short notes on any *two* : 10

    (*a*) Differential equation of wave motion

    (*b*) Distribution of energy in a stationary wave

    (*c*) Phase of resonance

    (*d*) Acoustic grating.