



THE AMERICAN COLLEGE, MADURAI
(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-accredited (2nd Cycle) by NAAC with Grade “A”, CGPA – 3.46 on a 4-point scale
Backlog Arrear Examination, March 2021

Course Code: PHS 1372 / 1472 / 1562
Course Title: Physics for Mathematics – II

Time: 3 Hours
Max. Mark: 75

PART – A

Answer Any FIVE Questions

(5x 15 = 75)

1. Explain the Kundz tube method to determine the velocity of sound in gas.
2. Describe the Magnetostriction method of producing ultrasonic wave
3. Write a detail note on intrinsic and extrinsic semiconductors with a neat sketch.
4. Explain about characteristics and biasing of p-n junction diode.
5. Derive Mayer’s relation from first law of thermodynamics.
6. Prove that $PV^\gamma = \text{Constant}$ in an adiabatic transformation.
7. Discuss the characteristics of sound waves in detail.
