

## **Report on CO class**

**BSC 3<sup>rd</sup> SEM PHYSICS (Generic/ Regular)**

**PAPER NAME:** Thermal Physics & Statistical Mechanics

**PAPER CODE:** PHY-HG/RC-1026

**Class taken on:** 26/09/2022

The course outcome class for the B.Sc. 3<sup>rd</sup> semester Generic and Regular class is taken on 26/09/2022 before commencement of the formal classes as per syllabus. In the class the course outcome “Thermal Physics & Statistical Mechanics” paper is discussed with the student. The summary of the outcome of the course that has been conveyed to the student is provided herewith.

**Course outcome:** Upon completion of this course, students are expected learn the basic concepts of thermodynamics, the first and the second law of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations, Maxwell’s thermodynamic relations, fundamentals of the kinetic theory of gases, Maxwell-Boltzman distribution law, equipartition of energies, mean free path of molecular collisions, viscosity, thermal conductivity, diffusion and Brownian motion, black body radiations, Stefan- Boltzmann’s law, Rayleigh-Jean’s law and Planck’s law and their significances, quantum statistical distributions, viz., the Bose- Einstein statistics and the Fermi-Dirac statistics. In the laboratory course, the students will be able to Measure of Planck’s constant using black body radiation, determine Stefan’s constant, coefficient of thermal conductivity of a bad conductor and a good conductor, determine the temperature coefficient of resistance, study variation of thermo emf across two junctions of a thermocouple with temperature, etc.

