

W-3254

M.Sc. (Fourth Semester) Examination, June-2020

PHYSICS

Paper - PT-403

Statistical Mechanics

Time : Three Hours

Maximum Marks : 85

Minimum Pass Marks : 29

Note : Attempt **all** questions.

- Q.1. When does the entropy of a system exhibit paradox? How was this paradox resolved?
- Q.2. Obtain the expression for the equipartition of energy. What is the energy of a system having N particles and having six degrees of freedom.
- Q.3. Write any two experiments to exhibit the anomalous behaviour of Liquid helium.
- Q.4. Explain the phenomenon of Johnson noise.
- Q.5. Obtain the expression for the fluctuations in the pressure of a canonical ensemble.

