

## Lesson Plan Format 2019-2020 (Even semester)

**Name of Assistant Professor: Mrs. Rekha Sharma**

**Class: B.SC II (Sem-IV) Non-Med (4-6)**

**Subject: Physics, Paper I ( Statistical physics PH-401)**

Week	Date	Topic
1	2 Jan 2020	<i>Holiday</i> (Guru Govind Singh Jayanti)
	3 Jan 2020	<b>Unit-I (PH-401)</b> Introduction: Microscopic and macroscopic systems,
	4 Jan 2020	Events mutually exclusive, dependent and independent
2	9 Jan 2020	Probability, statistical probability
	10 Jan 2020	A-priori probability and relation between them
	11 Jan 2020	Probability theorems, some probability considerations
3	16 Jan 2020	Combinations possessing maximum probability and minimum probability
	17 Jan 2020	Tossing of 2,3 and any number of coins, permutations and combinations
	18 Jan 2020	Distributions of N(for N=2,3,4) distinguishable and indistinguishable particles in two boxes of equal size
4	23 Jan 2020	Micro and macro states, thermodynamical probability
	24 Jan 2020	Constraints and accessible states, statistical fluctuations
	25 Jan 2020	General Distribution of distinguishable particles in compartments of different sizes
5	30 Jan 2020	<i>Holiday ( Vasant Panchami)</i>
	31 Jan 2020	Conditions of equilibrium between two systems in thermal contact-beta entropy
	1 Feb 2020	Entropy and probability (Boltzmann's relation) & <b>1<sup>st</sup> Assignment</b>
6	6 Feb 2020	<b>Class Test Unit I (PH-401)</b>
	7 Feb 2020	<b>Unit-II</b> Introduction: Postulates of statistical physics
	8 Feb 2020	Phase space, Division of phase space into cell,
7	13 Feb 2020	Three kinds of statistics, Basic approach in three statistics,
	14 Feb 2020	M.B. applied to an ideal gas in equilibrium-energy distribution law,
	15 Feb 2020	Speed distribution law, velocity distribution law
8	20 Feb 2020	Expression for average speed, r.m.s speed
	21 Feb 2020	<i>HOLIDAY (Maha Shivaratri)</i>
	22 Feb 2020	Average velocity, r.m.s velocity, most probable energy
9	27 Feb 2020	Mean energy for Maxwell's distribution
	28 Feb 2020	Numerical Problems & Revision
	29 Feb 2020	<b>Class Test Unit II</b>
10	5 March 2020	<b>Unit-III</b> Need for quantum statistics,
	6 March 2020	Bose-Einstein energy distribution law
	7 March 2020	Application of B.E. statistics of plank's radiation law B.E gas, Degeneracy and B.E condensation,

11	12 March 2020	<b>HOLIDAYS</b>
	13 March 2020	
	14 March 2020	
12	19 March 2020	Fermi Dirac energy distribution law, F.D gas and degeneracy,
	20 March 2020	Fermi energy and Fermi temperature, F.D energy distribution law,
	21 March 2020	Fermi dirac gas and degeneracy, Fermi energy and Fermi temperature
13	26 March 2020	F.D energy distribution law for electron gas in metals, Zero point energy,
	27 March 2020	Pressure and average speed of electron gas,
	28 March 2020	Specific heat anomaly of metals and its solution
14	2 April 2020	<b><i>Holiday (Ram Navami)</i></b>
	3 April 2020	M.B. distribution as a limiting case of B.E and F.D distributions, Comparison of three statistics, <b>2<sup>nd</sup> Assignment</b>
	4 April 2020	<b>Class Test Unit III (PH-401)</b>
15	9 April 2020	<b>Unit-IV (PH-401)</b> Dulong and petit law and its derivation from classical physics
	10 April 2020	Specific heat of low temperature,
	11 April 2020	Einstein theory of specific heat
16	16 April 2020	Criticism of Einstein theory Debye model of specific heat of solids, its success and shortcomings
	17 April 2020	Comparison of Einstein and Debye theories
	18 April 2020	Numerical Problems
17	23 April 2020	<b>Class Test Unit IV (PH-401)</b>
	24 April 2020	Revision
	25 April 2020	Revision
18	30 April 2020	Revision

SIGNATURE OF TEACHER

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