Lesson Plan Format 2019-2020 (Even semester)

Name of Assistant Professor: Mrs. Rekha Sharma

Class: B.SC II (Sem-IV) Computer Science (1-3)

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

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

11	9 March 2020	***HOLIDAYS***
	10 March 2020	
	11 March 2020	
12	16 March 2020	Fermi energy and Fermi temperature, F.D energy distribution law,
	17 March 2020	Fermi dirac gas and degeneracy, Fermi energy and Fermi temperature
	18 March 2020	F.D energy distribution law for electron gas in metals, Zero point energy,
13	23 March 2020	Pressure and average speed of electron gas,
	24 March 2020	Specific heat anomaly of metals and its solution
	25 March 2020	M.B. distribution as a limiting case of B.E and F.D distributions,
14	30 March 2020	Comparison of three statistics,
	31 March 2020	Numerical Problems and 2nd Assignment
	1 April 2020	**Class Test Unit III (PH-401)**
15	6 April 2020	***Holiday (Mahavir Jayanti)***
	7 April 2020	**Unit-IV (PH-401)** Dulong and petit law
	8 April 2020	and its derivation from classical physics
16	13 April 2020	Specific heat of low temperature,
	14 April 2020	***HOLIDAY (Ambedkar Jayanti)***
	15 April 2020	Einstein theory of specific heat
17	20 April 2020	Criticism of Einstein theory Debye model of specific heat of solids, its success and shortcomings
	21 April 2020	Comparison of Einstein and Debye theories
	22 April 2020	Numerical Problems
18	27 April 2020	**Class Test Unit IV (PH-401)**
	28 April 2020	Revision
	29 April 2020	Revision
19	4 May 2020	Revision

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