

LESSON PLAN FOR EVEN SEM

SESSION 2017-18

NAME OF ASSISTANT /ASSOCIATE PROFESSOR :AJEET KUMAR

CLASS/SECTION : A(4-6),B(1-3)

SUBJECT : PHYSICS PAPER :STATISTICAL PHYSICS

Week	Date	Topics
1	1-Jan-18	Microscopic and Macroscopic systems
	2-Jan-18	Events-mutually exclusive, dependent and independent. Probability
	3-Jan-18	Statistical probability, A- priori Probability and relation between them
	4-Jan-18	Microscopic and Macroscopic systems
	5-Jan-18	Events-mutually exclusive, dependent and independent. Probability
	6-Jan-18	Statistical probability, A- priori Probability and relation between them
	7-Jan-18	Sunday
2	8-Jan-18	Probability theorems, Some probability considerations
	9-Jan-18	combinations possessing maximum probability, combination possessing minimum probability
	10-Jan-18	Tossing of 2,3 and any number of Coins
	11-Jan-18	probability theorems, some probability considerations
	12-Jan-18	combinations possessing maximum probability, combination possessing minimum probability
	13-Jan-18	Tossing of 2,3 and any number of Coins
	14-Jan-18	Sunday
3	15-Jan-18	Permutations and combinations
	16-Jan-18	distributions of N (for N= 2,3,4) distinguishable and indistinguishable particles in two boxes of equal size
	17-Jan-18	Micro and Macrostates
	18-Jan-18	Permutations and combinations
	19-Jan-18	distributions of N (for N= 2,3,4) distinguishable and indistinguishable particles in two boxes of equal size
	20-Jan-18	Micro and Macrostates
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Thermodynamical probability
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Thermodynamical probability
	26-Jan-18	Republic Day

	27-Jan-18	Constraints and Accessible states
	28-Jan-18	Sunday
5	29-Jan-18	Constraints and Accessible states
	30-Jan-18	Statistical fluctuations
	31-Jan-18	general distribution of distinguishable particles in compartments of different sizes
	1-Feb-18	Statistical fluctuations
	2-Feb-18	general distribution of distinguishable particles in compartments of different sizes
	3-Feb-18	Condition of equilibrium between two systems in thermal contact-- β parameter
	4-Feb-18	Sunday
6	5-Feb-18	Condition of equilibrium between two systems in thermal contact-- β parameter
	6-Feb-18	Entropy and Probability (Boltzman's relation)
	7-Feb-18	Numerical Problems/Assignment/Test
	8-Feb-18	Entropy and Probability (Boltzman's relation)
	9-Feb-18	Numerical Problems/Assignment/Test
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
7	12-Feb-18	Postulates of statistical physics
	13-Feb-18	Maha Shivratri
	14-Feb-18	Phase space, Division of Phase space into cells
	15-Feb-18	Postulates of statistical physics
	16-Feb-18	Phase space, Division of Phase space into cells
	17-Feb-18	three kinds of statistics
	18-Feb-18	Sunday
8	19-Feb-18	three kinds of statistics
	20-Feb-18	basic approach in three statistics
	21-Feb-18	M. B. statistics applied to an ideal gas in equilibrium- energy distribution law (including evaluation of σ and β)
	22-Feb-18	basic approach in three statistics.
	23-Feb-18	M. B. statistics applied to an ideal gas in equilibrium- energy distribution law (including evaluation of σ and β)
	24-Feb-18	M-B Speed distribution law
	25-Feb-18	Sunday
9	26-Feb-18	M-B Speed distribution law
	27-Feb-18	M-B velocity distribution law

	28-Feb-18	Expression for average speed, r.m.s. speed, average velocity
	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	M-B velocity distribution law
	4-Mar-18	Sunday
10	5-Mar-18	r. m. s. velocity, most probable energy & mean energy for Maxwellian distribution.
	6-Mar-18	Numerical Problems/Students Queries
	7-Mar-18	Need for Quantum Statistics:
	8-Mar-18	Expression for average speed, r.m.s. speed, average velocity
	9-Mar-18	Numerical Problems/Students Queries
	10-Mar-18	Need for Quantum Statistics:
	11-Mar-18	Sunday
11	12-Mar-18	Bose-Einstein energy distribution law
	13-Mar-18	Application of B.E. statistics to Planck's radiation law, B.E. gas
	14-Mar-18	Degeneracy and B.E. Condensation,
	15-Mar-18	Bose-Einstein energy distribution law,
	16-Mar-18	Application of B.E. statistics to Planck's radiation law, B.E. gas,
	17-Mar-18	Degeneracy and B.E. Condensation,
	18-Mar-18	Sunday
12	19-Mar-18	Fermi-Dirac energy distribution law
	20-Mar-18	F.D. gas and Degeneracy
	21-Mar-18	Fermi energy and Fermi temperature,
	22-Mar-18	Fermi-Dirac energy distribution law
	23-Mar-18	Shadeedi Diwas of Bhagat Singh, Rajguru & Sukhdev
	24-Mar-18	F.D. gas and Degeneracy
	25-Mar-18	Sunday/Ram Navami
13	26-Mar-18	Fermi Dirac gas and degeneracy,
	27-Mar-18	Fermi Dirac energy distribution law for electron gas in metals
	28-Mar-18	Vacation I
	29-Mar-18	Mahavir Jayanti/Vacation I
	30-Mar-18	Vacation I

	31-Mar-18	Vacation I
	1-Apr-18	Sunday/Vacation I
14	2-Apr-18	Vacation I
	3-Apr-18	Vacation I
	4-Apr-18	Test/Queries
	5-Apr-18	Fermi energy and Fermi temperature,
	6-Apr-18	Fermi Dirac gas and degeneracy
	7-Apr-18	Fermi Dirac energy distribution law for electron gas in metals,
	8-Apr-18	Sunday
15	9-Apr-18	Zero point energy, Zero point pressure and average speed (at 0 K) of electron gas
	10-Apr-18	Specific heat anomaly of metals and its solution
	11-Apr-18	M.B. distribution as a limiting case of B.E. and F.D. distributions, Comparison of three statistics
	12-Apr-18	Zero point energy, Zero point pressure and average speed (at 0 K) of electron gas
	13-Apr-18	Specific heat anomaly of metals and its solution.
	14-Apr-18	Dr Ambedkar Jayanti/Vaisakhi
	15-Apr-18	Sunday
16	16-Apr-18	Dulong and Petit law, Derivation of Dulong and Petit law from classical physics, Specific heat at low temperature
	17-Apr-18	Einstein theory of specific heat, Criticism of Einstein theory,
	18-Apr-18	Parshurama Jayanti
	19-Apr-18	M.B. distribution as a limiting case of B.E. and F.D. distributions, Comparison of three statistics.
	20-Apr-18	Dulong and Petit law, Derivation of Dulong and Petit law from classical physics, Specific heat at low temperature
	21-Apr-18	Einstein theory of specific heat, Criticism of Einstein theory,
	22-Apr-18	Sunday
17	23-Apr-18	Debye model of specific heat of solids
	24-Apr-18	Success and shortcomings of Debye theory
	25-Apr-18	Comparison of Einstein and Debye theories
	26-Apr-18	Debye model of specific heat of solids
	27-Apr-18	Success and shortcomings of Debye theory
	28-Apr-18	Comparison of Einstein and Debye theories.

Ajeet Kumar