(Lesson Plan) ODD

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (*Odd Semester*)
Session – (2021-22)

Name of the Teacher: **Dr Renu Bala**

Department: **Physics**

Class: **B.Sc (II)**

Subject: **STATISTICAL Physics(I)**

Section (s):   **Non-Medical A, Non-Medical B,Vocational**

S.No.	Date (Monthly)		Topics Covered	Academic Activity Undertaken*
	From	**To**		
1	August,2021	30th Sep,2021	Basic ideas of Statistical Physics, Scope of Statistical Physics, basic ideas about probability, distribution of four distinguishable particles in two compartments of equal size. Concept of macrostates, microstates, thermodynamic probability, effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability.	✓ **Lecture** ✓ **Group Discussions** ✓ **Class Test**
	Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans			
2	1st Oct,2021	31st Oct,2021	Equilibrium state of dynamic system, distribution of distinguishable n particles in k compartments of unequal sizes. Phase space and its division into elementary cells, three kinds of statistics. The basic approach in the three statistics. Maxwell-Boltzman statistics applied to an ideal gas in equilibrium	✓ **Lecture** ✓ **Group Discussions** ✓ **Class test**
	Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans			
3	1st Nov,2021	30th Nov,2020	Experimental verification of Maxwell-Boltzman's law of distribution of molecular speeds.	✓ **Lecture** ✓ **Assignments**

			Need of quantum statistics--B.E. statistics, derivation of Planck's law of radiation, deduction of Wien's displacement law and Stefan's law from Planck's law	✓ **Mid-term test**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
4	1st Dec,2021	16th Dec,2021	F.D. statistics, Comparison of M.B., B.E. and F.D. statistics.	✓ **Lecture** ✓ **Group Discussions** ✓ **Assignments** ✓ **Revision** ✓ **Final Exam**

*Any of these – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

EVEN

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (*Even Semester*)
Session – (2021-22)

Name of the Teacher: **Dr Renu Bala**

Department: **Physics**

Class: **B.Sc (II)**

Subject: **Statistical Physics (II)**

Section (s):   **Non-Medical A, Non-Medical B, Vocational**

S.No.	Date (Monthly)		Topics Covered	Academic Activity Undertaken*
	From	**To**		
1	Februray,2022	28th Februray,2022	Statistical definition of entropy, change of entropy of a system, additive nature of entropy, law of increase of entropy, reversible and irreversible processes with examples. Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder	✓ **Lecture** ✓ **Group Discussions** ✓ **Class Test**
	Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans			
2	1st March ,2022	31th March,2022	Brief review of the terms and Laws of Thermodynamics, Carnot's Cycle. Entropy changes in Carnot's Cycle. Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path in a P.V. diagram, entropy of a perfect gas.	✓ **Lecture** ✓ **Group Discussions** ✓ **Class Test**
	Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans			
3	1st April,2022	30st April,2022	Equation of state of ideal gas from simple statistical consideration. Heat death of the universe. Derivation of Maxwell's thermodynamical relations and	✓ **Lecture** ✓ **Assignments** ✓ **Oral Tests** ✓ **Group Discussions**

			applications, cooling produced by adiabatic stretching, adiabatic compression, change of internal energy with volume. Expression for $(C_p - C_v)$	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
4	1st May,2022	15th May,2022	Change of state and Clayperon Equation. Thermodynamical treatment of Joule-Thomson effect. Use of Joule-Thomson effect for liquification of helium. Production of very low temperature by adiabatic demagnetisation.	✓ **Lecture** ✓ **Assignments** ✓ **Revision** ✓ **Final Exam**

*Any of these – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method