**(Lesson Plan) ODD**

**MCM DAV College for Women, Sector – 36A, Chandigarh**

**Monthly Teaching Plans (*Odd Semester*)**

**Session – (2020-21)**

**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**

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| **S.No.** | **Date**  **(Monthly)** | | | **Topics Covered** | **Academic Activity Undertaken\*** |
| **From** | **To** | |
| 1 | 13th August,2020 | 30th Sep,2020 | | 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 | * **Lecture using PPT** * **Online Sources** * **Discussions** |
|  |  |  | |  |  |
| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 2 | 1st Oct,2020 | 31st Oct,2020 | | effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability, equilibrium state of dynamic system,  distribution of distinguishable n particles in k compartments of unequal sizes | * **Lecture using PPT)** * **Group Discussions** * **Class test** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 3 | 1st Nov,2020 | 30th Nov,2020 | | 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(using board),** * **Assignments** * **Class test** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 4 | 1st Dec,2020 | 31st Dec,2020 | | Experimental verification of  Maxwell-Boltzman’s law of distribution of molecular speeds. | * **Lecture using google Jamboard** * **Online sources** * **Mid-term test** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 5 | 1st Jan,2021 | 20th Jan,2021 | | 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 | * **Lecture(using google Jamboard),** * **Discussions** * **Numerical Solving** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 6 | 20th Jan,2021 | | 10th Feb,2021 | F.D. statistics, Comparison of M.B., B.E. and F.D.statistics. | * **Lecture(using google Jamboard),** * **Group Discussions** * **Oral Tests and Assignments** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |

**\*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**

**(Lesson Plan)**

**MCM DAV College for Women, Sector – 36A, Chandigarh**

**Monthly Teaching Plans (*Even Semester*)**

**Session – (2020-21)**

**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**

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| **S.No.** | **Date**  **(Monthly)** | | | **Topics Covered** | **Academic Activity Undertaken\*** |
| **From** | **To** | |
| 1 | 15th March,2021  (Tentative) | 31st March,2021 | | 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. | * **Lecture using digital board** * **Online Sources** * **Group Discussions** * **PPT** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 2 | 1st April,2021 | 30th April,2021 | | Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder | * **Lecture(using digital board),** * **Group Discussions** * **Online Sources** * **PPT** * **Visual Demonstration** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 3 | 1st May,2021 | 31st May,2021 | | Brief review of the terms and Laws of Thermodynamics, Carnot’s Cycle. Entropy changes in Carnot’s  Cycle. | * **Lecture(using digital board),** * **Assignments** * **Oral Tests** * **Group Discussions** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 4 | 1st June,2021 | 30th June,2021 | | Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path  in a P.V. diagram, entropy of a perfect gas. Equation of state of ideal gas from simple statistical  consideration. Heat death of the universe. | * **Lecture using digital board** * **Online sources** * **Group Discussions** * **PPT** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
| 5 | 1st July,2021 | 31st July,2021 | | Derivation of Maxwell’s thermodynamical relations and applications, cooling produced by adiabatic  stretching, adiabatic compression, change of internal energy with volume. Expression for (Cp-Cv),  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(using digital board),** * **Group Discussions** * **Oral Tests and Assignments** |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |
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| **Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans** | | | | | |

**\*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