**Name of Assistant/Associate Professor:** Ms. Bhawna Saini **Subject: -** Botany

**Class & Section: -** B.Sc. (Semester II)

**Subject Lesson Plan: (From January 2018 to April 2018)**

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| **Week 1 (Jan4-Jan6)**  **Chapter:** Genetic Inheritance  **Prerequisites:**  **Assignment:** Group discussion |
| * Basic terms used in inheritance * Mendelism * Mendel’s laws of inheritance |
| **Week 2 (Jan11-Jan13)**  **Chapter:** Allelic interactions  **Prerequisites:**  **Assignments:** Group discussion on Mendelism |
| * Incomplete dominance * Lethal factor * Multiple alleles |
| **Week 3 (Jan18-Jan20)**  **Chapter:** Non-allelic interactions  **Prerequisites:**  **Assignments:** Oral Test |
| * Complementary and Supplementary genes * Duplicate genes * Epistasis * Plieotropy |
| **Week 4 (Jan25-Jan27)**  **Chapter :** Genetic material  **Prerequisites:** 3D model of DNA  **Assignments:** Written test |
| * Evidences for DNA as genetic material * Structure and types of DNA * Physical properties of DNA |
| **Week 5 (Feb1-Feb3)**  **Chapter :**Genetic material  **Prerequisites:** 3D model of DNA  **Assignment:** Notes preparationand diagram of DNA model |
| * Replication * DNA damage and repair |
| **Week 6 (Feb8-Feb10)**  **Chapter:** Genetic material  **Prerequisites:** 3D images of Nucleosome model  **Assignments:** Oral test |
| * DNA-protein interaction * Nucleosome model |
| **Week 7 (Feb15-Feb17)**  **Chapter:** Gene expression  **Prerequisites:**  **Assignments:** Written test |
| * Genetic code * Repetitive DNA |
| **Week 8 (feb22-Feb24)**  **Chapter:** Genetic variations  **Prerequisites:**  **Assignments:** WrittenTest |
| * Mutations * Types of mutations: spontaneous and induced * Transposable genetic elements |
| **Week 9 (Mar1-Mar3)**  **Chapter:**  **Prerequisites:**  **Assignments:** Notes preparation |
| * Vacations |
| **Week 10 (Mar8-Mar10)**  **Chapter :** Gene expression  **Prerequisites:** Videographic display of transcription  **Assignments:** Diagrams of transcription |
| * Central dogma * Transcription |
| **Week 11 (Mar15-Mar17)**  **Chapter :** Gene expression  **Prerequisites:** Videographic display of translation  **Assignments:** Diagrams of Translation |
| * Translation * Gene regulation: Inducible and repressible genes |
| **Week 12 (Mar22-Mar24)**  **Chapter:** Gene expression  **Prerequisites & Assignments:** Flow chart of protein classification |
| * Operon Model * Protein classification |
| **Week 13 (Mar29-Mar31)**  **Chapter** : Gene expression  **Prerequisites**: 3D images of protein structure  **Assignments:** Diagrams of protein structure |
| * Structure of proteins * Functions of proteins |
| **Week 14 (Apr5-Apr7)**  **Chapter :** Extranuclear inheritance  **Prerequisites & Assignments:** Labelled diagrams of Chloroplast |
| * Plastid DNA * Plasmids |
| **Week 15 (Apr12-Apr14)**  **Chapter:** Extranuclear inheritance  **Prerequisites:** Labelled diagram of mitochondria  **Assignments:** Written test |
| * Presence and function of mitochondrial DNA * Revision |