**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
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| **Week 2 (Jan11-Jan13)****Chapter:** Allelic interactions**Prerequisites:** **Assignments:** Group discussion on Mendelism |
| * Incomplete dominance
* Lethal factor
* Multiple alleles

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| **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
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| **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
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| **Week 9 (Mar1-Mar3)****Chapter:** **Prerequisites:** **Assignments:** Notes preparation |
| * Vacations
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| **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
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| **Week 15 (Apr12-Apr14)****Chapter:** Extranuclear inheritance**Prerequisites:** Labelled diagram of mitochondria**Assignments:** Written test |
| * Presence and function of mitochondrial DNA
* Revision
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