**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Even Semester**

**(2017-18)**

**Name of the Teacher: Dr. Deepika Sharma**

**Class: B.Sc. I , Sem II (Paper –B) Period: 5th**

**M.Sc. II, Sem IV (Paper XVI) Period: 4th (Wed), 5th (Tue) and 6th (Fri)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No** | **Date From** | **Date Upto** | **Class** | **Topics to be covered** |
| Week 1 | Jan 08 | Jan 13 |  | ---- |
| Week 2 | Jan 15 | Jan 20 | B.Sc.  M.Sc. | Mendel’s law of Dominance, segregation and Independent assortment |
| Concept of ΔG; Laws of Thermodynamics; Exergonic and Endergonic reactions. |
| Week 3 | Jan 22 | Jan 27 | B.Sc.  M.Sc. | Linkages |
| Entropy and Energy; Free Energy and Equilibrium Constant; Redox potential. |
| Week 4 | Jan 29 | Feb 3 | B.Sc.  M.Sc. | Cytological interpretation of Mendelism |
| Ionization of water and buffering against pH changes in biological systems |
| Week 5 | Feb 5 | Feb 10 | B.Sc.  M.Sc. | Non allelic gene interactions: epistasis, supplementary, complementary &duplicate genes. |
| Henderson-Hassalbach equation and fitness of the aqueous environment for living organisms. |
| Week 6 | Feb 12 | Feb 17 | B.Sc.  M.Sc | Quantitative inheritance |
| Structure types, properties and Metabolism of Amino acids; Motif and folds |
| Week 7 | Feb 19 | Feb 24 | B.Sc.  M.Sc. | Allelic gene interactions |
| Classification of proteins, Reverse turns and Ramachandran plot. |
| Week 8 | Feb 26 | Mar 03 | B.Sc.  M.Sc. | Multiple alleles , Pleiotropic genes |
| Nomenclature and Classification; Enzyme Kinetics |
| **2nd week March (Mid Semester Exam)** | | | | |
| Week 9 | March 12 | March 17 | B.Sc.  M.Sc. | Chromosome theory of heredity, parallelism between chromosome and Mendelian factors |
| Carbohydrates:Classification, composition and structure |
| Week 10 | March 19 | March 24 | B.Sc.  M.Sc. | Sex linked inheritance, |
| Lipids:Classification, Structure and functions |
| Week 11 | March 26 | March 31 | B.Sc.  M.Sc. | Cytoplasmic or extracellular inheritance |
| Compounds of Energy Transfer |
| Week 12 | April 02 | April 07 | B.Sc. M.Sc. | Plastid inheritance in *Mirabilis,* Mitochondrial in yeast |
| Compounds of Redox Reactions |
| Week 13 | April 09 | April 14 | B.Sc.  M.Sc. | Genetic variations |
| Sites and mechanism of Oxidative Phosphorylation |
| Week 14 | April 16 | April 21 | B.Sc.  M.Sc. | Mutations: characterstics, types, importance and factors |
| Processes generating substrates for Oxidative Phosphorylation |
| Week 15 | April 23 | April 28 | B.Sc.  M.Sc. | Mutagens DNA, Damage and repair |
| Coupled Reactions, Group Transfer, Biological energy Transducers |
| Week 16 | April 30 | May 05 | B.Sc. M.Sc. | Repair system in prokaryotes and eukaryotes, REVISION |
| Biosynthesis of terpenes and phenols and their role, REVISION |