**Post Graduate Govt. College for Girls, Sector-42, Chandigarh**

**Teaching Plan (Even Semester) Session (2019-2020)**

**Name of the Teacher: Dr. Davinder kaur**

**Class: Subject: Period: Paper: Room No:**

B.Sc. I year (Paper B) Botany 5 (4,5,6 day) B 128

B.Sc. III year (Paper A) Botany 1 (2,4,6 day) A 219

M.Sc. I year Rep. Biology of Angiosperms 2 (1,2,3 day) P-IX 211

Plant pathology 2 (4,5,6 day), 3 (1 day) P-X 211/224

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| **S. No** | **Dates** |  | **Topics to be Covered** |
| Week 1 | 09-01-2020 to 11-01-2020 | --------------- | ---------- |
| Week 2 | 13-01-2020 to 18-01-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Mendel’s law of Dominance, segregation and Independent assortment  Introduction  P-IX:Structure of anthers, Microsporogenesis, Role of tapetum  P-X: Symptomatology in fungal infection |
| Week 3 | 20-01-2020 to 25-01-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Linkages  Photosynthesis: Photosynthetic pigments, action spectrum, concept of two photosystems, cyclic and non cyclicphotophorylation  P-IX: Pollen development, Pollen wall structure, Male sterility  P-X: Role of enzymes in pathogenesis |
| Week 4 | 27-01-2020 to 01-02-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Cytological interpretation of Mendelism  Calvin cycle, C4 pathway, CAM plants, photorespiration, factors affecting photosynthesis  P-IX: Apomixis: Types and evolutionary significance  P-X: Role of toxin in pathogenesis |
| Week 5 | 03-02-2020 to 08-02-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Non allelic gene interactions: epistasis, supplementary, complementary &duplicate genes.  Transport of organic substances, mechanism of phloem transport, source-sink relationship, factors affecting translocation.  P-IX: Hybrid seed production, Pollen viability and storage  P-X: Defense mechanism |
| Week 6 | 10-02-2020 to 15-02-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Quantitative inheritance  Respiration: ATP, aerobic and anaerobic respiration, kerb cycle.  P-IX: Ovule development, Megasporogenesis  P-X: Host parasite interactions |
| Week 7 | 17-02-2020 to 22-02-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Allelic gene interactions  Electron transport mechanism, redox potential, oxidative phosphorylation.  P-IX: Organization of Embryo sac, structure of embryo sac cells  P-X: Disease forecasting and assessment |
| Week 8 | 24-02-2020 to 29-02-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Multiple alleles , Pleiotropic genes  Pentose phosphate pathway and respiration quotient.  P-IX: Floral characteristics, breeding systems  P-X: Disease control |
| Week 9 | 02-03-2020 to 05-03-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Chromosome theory of heredity, parallelism between chromosome and Mendelian factors  Revision and test  P-IX: Pollination mechanisms and vectors  P-X: Nutrition in fungi |
| Mid Semester Exams (06-03-2020 to 13-03-2020) | | | |
| Week 11 | 14-03-2020 to 21-03-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Sex linked inheritance  Growth and development: definitions; phases of growth and development; kinetics of growth  P-IX: Structure of the pistil, Pollen-stigma interactions  P-X: Etiology epidemiology and control of following diseases; paddy blast, brown leaf spot, bacterial blight, rusts, bunt and smuts of wheat |
| Week 12 | 24-03-2020 to 28-03-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Cytoplasmic or extracellular inheritance  Factors affecting growth; plant movements, the concept of photoperiodism, physiology of flowering  P-IX: Sporophytic self – incompatibility  P-X: Tundu disease, red rot and smut of sugarcane, downy and powdery mildews of grapes |
| Week 13 | 30-03-2020 to 04-04-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Plastid inheritance in *Mirabilis,* Mitochondrial in yeast  Florigen concept; roles of plant hormones auxins, gibberellins, cytokinins  P-IX: Gametophytic self – incompatibility  P-X: Leaf curl of peach, tikka disease of groundnut, apple scab |
| Week 14 | 07-04-2020 to 11-04-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Genetic variations  Abscisic acid and ethylene, history of their discovery  P-IX: Double fertilization, *in vitro* fertilization  P-X: White rust, downy mildew of mustard, early and late blight of potato, wart disease |
| Week 15 | 15-04-2020 to 18-04-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Mutations: characterstics, types, importance and factors  Biotechnology: functional definition; basic concepts of plant tissue culture  P-IX: Endosperm: Development and types  P-X: Rust of linseed, damping of seedlings, ergot of rye |
| Week 16 | 20-04-2020 to 24-04-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Mutagens DNA, Damage and repair  Application of plant tissue culture and somatic hybridization  P-IX: Development of embryo in Monocots  P-X: Diseases caused by plant viruses, MLOs, spiroplasma, viroids and mycoviruses |
| Week 17 | 27-04-2020 to 02-05-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Repair system in prokaryotes and eukaryotes  Revision  P-IX: Development of embryo in Dicots  P-X: General symptoms and principles of control |
| Week 18 | 04-05-2020 | B.Sc. I year (Paper B)  B.Sc. III year (Paper A)  M.Sc. I year | Revision and Test  Revision and Test  P-IX: Seed: Structure and formation  P-X: Revision and Test |