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

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

**Class: B.Sc. III, M.Sc. II Name of the Teacher:** **Dr. Manvi Malwal**

**Subject: Plant Ecology, Period: 1(Day 1,35) Room No: 218**

**\*Moleculer Biology : 5( Day 1-3) : 211**

**\*\*Cytogenetics : 4 (Day4) 5(5Day), 6(6Day) : 224**

**\*\*\* Plant Biotechnology :2(3d) 6(1,4day) : 221,224**

**\*\*\*\* Ecology and Environment : 5 (5d) 6(2,6) :213,224,211**

**Paper: BSc (Paper B); MSc ( Paper XI,XIII,XIV,XV)**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 23-07-2019 to 27-07-2019 | B.Sc. III: Ecology general account and relationships with other sciences  M.Sc. II: \*:- Cell cycle and apoptosis, mechanism of programmed cell death.  \*\*:- Mutation, chromosomes  \*\*\* History and scope of biotechnology  \*\*\*\* Concept and principles of ecosystem |
| Week 2 | 29-07-2019 to 03-08-2019 | B.Sc. III: Climatic factors, edaphic factors  M.Sc. II: \*:- Nucleic Acid A-, B- , Z-DNA, RNA  \*\*:- Transposons, chromosomes  \*\*\* Population ecology  \*\*\*\*tissue culture techniques |
| Week 3 | 05-08-2019 to 10-08-2019 | B.Sc. III: Topographic and biotic factors  M.Sc. II: \*:- Biosynthesis of Nucleotides and Biological importance of nucleotides.  \*\*:- DNA damage &repair, karyotype  \*\*\* Tissue culture techniques  \*\*\*\* Plant communities |
| Week 4 | 13-08-2019 to 17-08-2019 | B.Sc. III: Ecosystem concept and structure  M.Sc. II: \*:-Replication of DNA  \*\*:- Structure changes in chromosomes  \*\*\* Protoplast culture and somatic hybridization  \*\*\* \* Biosphere reserves |
| Week 5 | 19-08-2019 to 24-08-2019 | B.Sc. III: Abiotic and biotic component  M.Sc. II: \*:- Different DNA enzymes  \*\*:- Structure changes in chromosomes  \*\*\* Anther culture and haploid roles  \*\*\*\* Biogeochemical cycles |
| Week 6 | 26-08-2019 to 31-08-2019 | B.Sc. III: Trophic level, food chain, food web, ecological pyramids  M.Sc. II: \*:- RNA  \*\*:- Numerical changes in chromosomes  \*\*\* Recombinant DNA technology  \*\*\*\* Biogeochemical cycles |
| Week 7 | 02-09-2019 to 07-09-2019 | B.Sc. III: Energy flow, biogeochemical cycle.  M.Sc. II: \*:-Biosynthesis of different type of RNA  \*\*:- Numerical changes in chromosomes  \*\*\* Recombinant DNA technology  \*\*\*\* Biodiversity |
| Week 8 | 09-09-2019 to 14-09-2019 | B.Sc. III: Community characterstics  M.Sc. II: \*:- RNA Processing  \*\*:- Numerical changes in chromosomes  \*\*\* Application of biotechnology  \*\*\*\* biodiversity |
| Week 9 | 16-09-2019 to 21-09-2019 | B.Sc. III: Community frequency and density cover  M.Sc. II: \*:- RNA transport  \*:-Immune Responses, antigens, immunoglobins, MHC, application of immunological principles.  \*\*\* Application of biotechnology  \*\*\*\* Pollution |
| Week 10 | 23-09-2019 to 28-09-2019  (Youth Festival 24-09-2019 to 27-09-2019) | B.Sc. III: Life forms, biological spectrum  M.Sc. II: \*:- RNA transport  \*\*:- Numerical changes in chromosomes  \*\*\* application of biotechnology  \*\*\*\* pollution |
| Week 11 | 30-09-2019 to 05-10-2019 | B.Sc. III: Ecological succession  M.Sc. II: \*:- Translation  \*\*:- Restriction Maps and Molecular Genetic Maps  \*\*\* Application of biotechnology  \*\*\*\* Pollution |
| Mid Semester Exams | | |
| Week 12 | 16-10-2019 to 19-10-2019 | B.Sc. III: Air pollution  M.Sc. II: \*:- Post translation processing of polypeptides  \*\*:- FISH, GISH; chromosome jumping; Random amplified polymorphic DNA and  AFLP techniques.  \*\*\* Application of biotechnology  \*\*\*\* Management and conservation of natural resources |
| Week 13 | 21-10-2019 to 26-10-2019 | B.Sc. III: Water pollution  \*\*\* Application of biotechnology  \*\*\*\* |
| Week 14 | 29-10-2019 to 02-11-2019 | B.Sc. III: Soil pollution  M.Sc. II: \*:- Regulation of gene expression in eukaryotes, model of control, translation enzymatic & hormonal control  \*\*:- Alien Gene Transfer through Chromosome Manipulations; characterization and utility of alien addition and substitution lines.  Non conventional sources |
| Week 15 | 04-11-2019 to 09-11-2019 | B.Sc. III: Conservation of resources  M.Sc. II: \*:- Cancer biochemistry& mol bio , cell cycle, threauptic interventions of uncontrolled cell growth  \*\*:- Transfer of whole genome, transfer of individual chromosomes and chromosome segments;  \*\*\*\* Ozone depletion and invasion of alien plants |
| Week 16 | 11-11-2019 to 16-11-2019 | B.Sc. III: Conservation of resources  M.Sc. II: \*:- Immunoglobins  \*\*- methods for detecting alien chromatin,  \*\*- Recombinant DNA technolgy  \*\*\*\*- Molecular Cytogentics  \*\*\*\*Global warming and climate change |
| Week 17 | 18-11-2019 to 23-11-2019 | B.Sc. III: Revision  M.Sc. II: \*:- Cancer  \*\* - Recombinant DNA technology  \*\*\* Molecular cytogentics  \*\*\*\* Weed management |
| Week 18 | 25-11-2019 to 30-11-2019 | B.Sc.III: Revision  M.Sc. II: \* Revision  \*\* Revision  \*\*\* Revision  \*\*\*\* Revision |