**P.G. GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**TEACHING PLANNER (2nd, 4th & 6th Semester)**

**SESSION (2019-20)**

**Class:** B.Sc.- I (1st Week) **Name of the Teacher: Dr. SANJAY KUMAR JHA**

M.Sc.- II (2nd Week)

**Subject: ZOOLOGY Period:** B.Sc.- I (1st , 2nd & 4th)

M.Sc.- II (3rd, 4th-7th)

B.Sc.- III (6th & 7th)

**Paper:** B.Sc.- I: Paper- A+B (Room No.: 126 & 315)

M.Sc.- II: Paper- XVIII (Room No: 130 & 131)

B.Sc.- III: Paper- A & B (Room No.: 126 & 130)

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| **S. No.** | **Date from** | **Date upto** | **Topics to be Covered** |
| Week 1 | Jan. 13, 2020 | Jan. 18, 2020 | Introduction to Phylum Arthropoda and their classification; Type study of *Periplaneta* (Cockroach) for (B.Sc.-I).  Introduction to Fisheries in the Indian context, history, scope, types & various kinds of Aquaculture (M.Sc.-II). |
| Week 2 | Jan. 20, 2020 | Jan. 25, 2020 | Type study of *Periplaneta* (Contd.) for (B.Sc.-I).  Induced breeding techniques in fishes (Natural & Artificial), Polyculture and Composite fish culture (M.Sc.-II). |
| Week 3 | Jan. 27, 2020 | Feb. 01, 2020 | Type study of *Palamneus* (Prawn) for (B.Sc.-I).  Concept of Productivity (Primary & Secondary) and its estimation methods (M.Sc.-II).  Various Aquaculture practices and its Impact (B.Sc.-III Hons.) |
| Week 4 | Feb. 03, 2020 | Feb. 08, 2020 | Type study of *Palamneus* (Prawn) for (B.Sc.-I) (Contd.).  Ecological classification of aquatic organisms other than fishes; Biological control of aquatic weeds and algal blooms (M.Sc.-II).  Concept of Genetics, Mendel’s law of Genetics (B.Sc.-III).  Limnological parameters of fresh water ecosystem (B.Sc.-III Hons.). |
| Week 5 | Feb. 10, 2020 | Feb. 15, 2020 | Type study of *Pila globosa* (Apple Snail) for (B.Sc.-I).  Characters of lotic environment (river/ stream), abiotic and biotic factors affecting body form in hill stream fishes (M.Sc.-II).  Mendel’s law of dominance & Segregation; Complete, Incomplete and Co-dominance (B.Sc.-III).  Productivity (primary & secondary) in an Aquatic Ecosystem (B.Sc.-III Hons.) |
| Week 6 | Feb. 17, 2020 | Feb. 22, 2020 | Type study of *Pila globosa* (Apple Snail) contd. for (B.Sc.-I).  Limnological parameters (physical and chemical), effect of various anthropogenic activities on fish population (M.Sc.-II).  Various types of Interactions of Genes (Modified Mendelian ratios) (B.Sc.-III).  Ecological succession in water upto climax; various adaptations of aquatic organisms. (B.Sc.-III (Hons.). |
| Week 7 | Feb. 24, 2020 | Feb. 29, 2020 | Introduction to Phylum Echinodermata & Type study of *Asterias* (Star fish) for (B.Sc.-I).  Age and growth determination in fishes using various hard parts such as scales, opercular bones, etc. (M.Sc.-II).  Modified Mendelian Ratios (contd.), Multiple alleles and multiple factors, Pseudoalleles (B.Sc.-III). |
| Week 8 | Feb. 02, 2020 | Mar. 05, 2020 | Type study of *Asteria* (contd.) for B.Sc.-I.  Fish preservation and transportation; Rigor Mortis, autolysis and auto-oxidation and their significance, microbial spoilage in fishes. (M.Sc.-II).  Linkage, crossing over and recombination and its cytological basis (B.Sc.-III). |
| **Mid-Semester Exams (06-03-2020 to 13-03-2020)** | | | |
| Week 9 | Mar. 16, 2020 | Mar. 21, 2020 | Introduction to Phylum Hemichordata Type study of *Balanoglossus* (B.Sc.-I).  Major and minor constituents in fish including minerals and trace elements in fishes (M.Sc.-II).  Genes and Genetic codes, structure of nucleic acids (DNA & RNA); Replication and Transcription of DNA (B.Sc.-III). |
| Week 10 | Mar. 24, 2020 | Mar. 28, 2020 | Introduction to Ecology and its various applied branches (B.Sc.-I).  Concept of Transgenic fish and GMOs with bio-safety regulations (M.Sc.-II).  Expression of genes (Prokaryotes and Eukaryotes); Properties of genetic code, wobble hypothesis, Kappa particles in *Paramecium* (B.Sc.-III). |
| Week 11 | Mar. 30, 2020 | Apr. 04, 2020 | Study of Ecology (B.Sc.-I).  Concept of Stock fish, DNA Markers, Allozymes, RFLP, RAPD, AFLP, Microsatellites, SNPs, ESTs, Type I&II markers, mtDNA and nuclear DNA (M.Sc.-II).  Mutations and mutagens; various inborn errors of metabolism in man; Somatic mutations and carcinogenesis; Gene regulation in prokaryotes and eukaryotes (B.Sc.-III). |
| Week 12 | Apr. 07, 2020 | Apr. 11, 2020 | Study of Ecology (B.Sc.-I).  Determination of growth of fish using length-weight equation.  Population genetics and Hardy-Weinberg Law; Genetic recombination in bacteria; Recombinant DNA, Gene cloning (B.Sc.-III). |
| Week 13 | Apr. 15, 2020 | Apr. 18, 2020 | Study of Ecology (B.Sc.-I).  Concept of DNA fingerprinting and its applications (B.Sc.-III). |
| Week 14 | Apr. 20, 2020 | Apr. 25, 2020 | Revision Work & Practical Exams |