

Lecture schedule

S. No.	Topic	No. of classes
Theory		
1.	Systematics, Taxonomy and Classification, Importance of taxonomy	01
2.	Describing and naming of a new species, International Code of Zoological Nomenclature, and its amendments and rules of Binomial Nomenclature	01
3.	Zoo Bank and its policies	01
4.	Morphology, Morphometric, Meristic, Osteology and Soft anatomical characters	01
5.	Classification of modern fishes up to order and family levels - Elasmobranchii (Cartilaginous fishes) and Actinopterygii (bony fishes)	03
6.	Classification of commercially important Arthropods up to family level (Prawns, Shrimps, Lobsters and Crabs);	01
7.	Classification of commercially important molluscs up to family level (Gastropods, Bivalves, Cephalopods and Scaphopods)	01
8.	Classification of commercially important invertebrate up to family level: Echinodermata (Sea Cucumbers)	01
9.	Preparations of dichotomous key	01
10.	Phylogeny and Zoo geography	01
11.	Modern tools of taxonomy: Cytotaxonomy, Basics of biochemical taxonomy (Electrophoretic studies of muscle myogen, eye-lens protein, enzyme pattern and serology)	01
12.	PCR based methods and DNA finger printing	01
13.	Mitogene in fish identification	01
14.	Identification of fish through auto-image processing	01
Practical		
1.	Collections and preparation of field data	01
2.	Preservation techniques of specimens	01
3.	Morphology, Graphical representation and statistical analysis of meristic, Morphometric, Osteological and soft anatomical characters	02
4.	Type of keys - Dichotomous, Bracket, Indented, Branching, Pictorial and computer keys	01
5.	Protocols followed for describing of a new species	01
6.	Use of distribution maps; curation and sorting protocols	02
7.	Visit to freshwater markets of the locality and inventorying of commercially important fishes, Mollusca, Crustacea	04
8.	Visit to landing centres of the locality and inventorying of commercially important fishes, Mollusca, Crustacea	04
9.	Identification of commercially important marine waters fishes, Mollusca, Crustacea, Echinodermata present in lab	04
10.	Karyotyping - preparation and identification of chromosomes	03
11.	Electrophoresis studies (muscle myogen, eye-lens protein, enzyme pattern and serology) in fish taxonomy	02
12.	Molecular markers - PCR, RAPD, RFLP, Microsatellites, mini satellites and	03

	Mitochondrial DNA and their application in fish phylogenetic studies	
13.	DNA Barcoding	04
Total no. of classes		48

Rupam

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Course Teacher