SEMESTER 2nd
MINOR COURSE

IFF222N INDUSTRIAL FISH AND FISHERIES (BIOLOGY AND BEHAVIOUR OF FISHES)

CREDITS: THEORY: 04; PRACTICALS: 02

Course Objectives*: This course has been designed to educate undergraduate students about fisheries with emphasis on their food, reproduction and growth*

Learning Outcome*: The students will be able to understand the biology and basic nutritional requirements of the fishes*

THEORY (4 CREDITS)

UNIT I: SOCIAL BEHAVIOUR

1.1 Social behaviour, Aggregation and shoaling
1.2 Chemoreception in fishes
1.3 Fish Migration
1.4 Parental care in fishes

UNIT II: FOOD AND FEEDING IN FISHES

2.1 Natural food of fishes
2.2 Feeding habits in various groups of fresh water fishes
2.3 Feeding habits of local fish fauna-carp, schizothorax and trout
2.4 Supplementary fish feed

UNIT III: GROWTH IN FISHES

3.1 Introduction to growth parameters
3.2 Growth of fish: Absolute and relative growth (isometric and allometric growth).
3.3 Estimation of growth by different methods
3.4 Length- weight relationship, Ponderal index, relative condition factor, Ganodosomatic index and Gastrosomatic index

UNIT IV: SPAWNING AND REPRODUCTION IN FISHES

4.1 Spawning habits. Factors effecting spawning
4.2 Fecundity and estimation of fecundity.
4.3 Reproduction and its types in fishes
4.4 Sexual dimorphism and maturity in fishes

PRACTICAL'S: (2 CREDITS)

1. Qualitative and quantative methods for stomach content analysis.
2. Classification of maturity stages in male and female fish.
3. Estimation of relative condition factor and gonadosomatic.
4. Study of spawning habits of fish.
5. Identification of fish eggs and larvae.
6. Field visits to observe fishing and collect field data regarding riverine, estuarine, reservoir and cold-water fisheries. Analysis of data, drawing of graphs, charts, histographs and recording of salient features of all fisheries in the practical record book

SUGGESTED READINGS:

1. Handbook of Museum techniques, By Aryapam, A. And S.T. Satyamurthy.
2. Fisheries Biology By Pitcher, T.J. and P.I.E. Hart.
3. Introduction to the practice of Fishery Science By Royce, K.F.
4. Fish stock Assessment, A manual of basic methods By Gullard, J.A. FAO. Rome.
5. Manual methods in Fisheries Biology By FAO. Rome.
6. Fishery Science, its methods and applications By Rounsgell, G.A. and W.H. Everhart.
7. Field visit to various fisheries units.