

SEMESTER – I
AC I - BIOLOGY OF INVERTEBRATES AND CHORDATES

Int: 25
Ext:75

Subject Code : UZA1
Exam Hours : 3

Objectives:

To understand the Organization ,life history of various groups of invertebrates and chordates.
To study the characteristics and adaptations of invertebrates and chordates

BIOLOGY OF INVERTEBRATES

UNIT –I

Organisation and life history **12 hours**

Phylum Protozoa – Paramecium.
Phylum Porifera – Ascon sponge
Phylum Coelenterata – Obelia

UNIT- II

Organisation and life history **12 hours**

Phylum Platyhelminthes – Taenia solium
Phylum Annelida – Earthworm
Phylum Arthropoda – Penaeus monodon

UNIT III

Organisation and life history **12 hours**

Phylum Mollusca – Freshwater mussel
Phylum Echinodermata – Star fish

BIOLOGY OF CHORDATES

UNIT IV **12 hours**

Pisces – Shark – External feature & Respiratory system
Amphibia – Frog – External feature , Excretory & Circulatory system
Reptilia – Calotes – External feature & Structure of Brain.

UNIT V **12 hours**

Aves – Pigeon – External feature , Respiratory system & Flight adaptation
Mammalia – Rabbit – Dentition, Digestive system and Urinogenital system

REFERANCE

1. **Ekambaranatha ayyar M and Ananthakrishnan.T.N(1994)**
Manual of zoology vol.I ,S.Viswanathan pvt.Ltd.,Madras.
2. **N.Arumugan N.C.Nair,Dr.T.Murugan**-Text book of Invertebrates, Saras Publications.
3. **Jordon E.L and Verma P.S.(^ 1983)** Invertebrate zoology S.Chand &Co
4. **Koptal R.L(1997)**Modern text book of zoology, , Rastogi company,
Meerut(VP),India.
- 5.**S.N.Prasad**- Text book of Invertebrate zoology kitab mahal, Allahabad.
6. **Ayyar E.M and T.N Ananthakrishnan** ,1992. Manual of zoology
Vo.II(chordata),S.Viswanathan(printers and publishers),pvt., ltd., madras.
7. **Dhami, D.S and Dhami** .1978. Chordate zoology R.Chand & Co.
8. **Koptal , R.L(1997)**. Modern Text book of Vertebrate Zoology, Rastogi and
Company, Meerut, India.

SEMESTER - II
AC II - (BIOLOGY OF INVERTEBRATES & CHORDATES
AND ENTREPRENEURIAL ZOOLOGY)

Int: 40

Ext:60

Subject Code : UZA2Y

Exam Hours : 3

I DISSECTION

1. Earth worm- Digestive system and Nervous system
2. Lamellidens- Alimentary canal
3. Fish – Digestive system

II MOUNTING

1. Earth worm - Body setae and Pineal setae
2. Mouthparts - Cockroach, Honey Bee and Mosquito
3. Shark - Placoid scales

III SPOTTERS

Invertebrata

Paramecium caudatum – Entire,

Paramecium – Conjugation,

Obelia geniculata - Entire

Taenia solium – Entire

Scolex,

Neries,

Pila,

Star fish

Chordata

Shark,

Exocoetus,

Hyla,

Bufo,

Calotes,

Cobra,

Pigeon,

Bat,

Rabbit

Entrepreneurship Zoology

1. Earth Worm, Apis indica, Lac insect, Bombyx mori, Catla, Rohu, Common Carp

.Panaeus monodon, Pearl oyster (Pinctada vulgaris), Hen

Products of Animal

Vermicompost,

Honey,

Lac,

Silk,

Pearl ,

Hen egg,

Fish liver oil

A record of lab work should be maintained and submitted at the time of practical examination for valuation.

SEMESTER - II
AC III - ENTREPRENEURIAL ZOOLOGY

Int: 25
Ext: 75

Subject Code : UZA3
Exam Hours : 3

Objectives:

To bring about an awareness to the various branch of Zoology available to get the self employment opportunity .To generate employments, To motivate to become entrepreneurs.

Unit-I **12 hours**

Vermiculture-Types : Eugenia, Endrilles and Perionyx excavatus
Biology of Earthworm – Vermicomposting - Required Conditions – Methods (pit and heap) – Advantages – Economic importance of vermiculture

Unit-II **12 hours**

Apiculture – Species of Honey Bee, Types of Honey bee – Newton’s Bee hive – Care and Management – Honey extraction and Honey extracting equipments (Honey extractor, Smoker, Queen excluder, Drone excluder, Bee veil. – Nutritive and Medicinal value of Honey, Advantages –Economic importance of Apiculture

Unit – III **12 hours**

Lac Culture – Life cycle of Lac insect - Economic importance of Lac.
Sericulture: Life cycle of Bombyx mori – Economic importance of silk.

Unit – IV **12 hours**

Aquaculture – Construction and Management of Pond. Culture practices of Common Carp. Shrimp Culture – Penaeus mondon- Pearl culture

Unit – V **12 hours**

Poultry farming – Types of Poultry – Care and Management – Poultry nutrition – Diseases and their management – Composition and Nutritive value of egg- Economics of Poultry production.

REFERENCE:

1. **Pillai, T.V.R.**, 1988. Aquaculture: Principle and practices. Fishing news books.
2. **Ramasamy,P.**, 1992. Diseases of Shrimps in aquaculture systems, Vanitha publication
3. **Santhanam, R.**, 1987. Fisheries Science, Daya publishing house.
4. **Arumugam, N.** Aquaculture Saras Publications.
5. **Shukla, G.S.** and **Upadhyay V.B.** (1997) Economics Zoology, Rastogi publications, Meerut.
6. **Morse, R.A.** 1990. The ABC and XYZ of Bee Culture 40th Edition A.I. Root & Co., Ohio.
7. **Manjuyadav.,**(2003).Economic Zoology ,Discovery Publishing House. New Delhi.