K.T.S.P. Mandal's
Hutatma Rajguru Mahavidyalya

Syllabus completion Report (A.Y.2021 – 2022)

Department of Zoology

T. Y. B. Sc. Zoology

Course Code: ZO – 3510

Course Title: Aquarium management

Sr. no.	Month	Topic	Teacher
1.	Oct	**1.Introduction to Aquarium Fish Keeping:** 1.1 The potential scope of Aquarium Fish Industry as a Cottage Industry. 1.2 Exotic and Endemic species of Aquarium Fishes. 1.3 Nutritional value of fish	SSN
2.	Oct	**2.Introduction to Aquarium Fish Keeping:** 1.1 The potential scope of Aquarium Fish Industry as a Cottage Industry. 1.2 Exotic and Endemic species of Aquarium Fishes. 1.3 Nutritional value of fish	SSN
3.	Nov	**3.Food and feeding of Aquarium Fishes:** 3.1 Use of live fish feed organisms. 3.2 Preparation and composition of formulated fish feeds. 3.3 Overview on types of fish food.	SSN
4.	Nov & Dec	**4.Fish Transportation:** 4.1 Live fish transport: a) Fish handling. b) Fish packing. c) Fish forwarding techniques. 4.2 Causes of mortality in transport.	SSN
5.	Dec	**5.Maintenance of Aquarium:** 5.1 General Aquarium Maintenance - budget for setting up an Aquarium. 5.2 Fish Farm as a Cottage Industry, Rules & regulations of fish rearing. 5.3 Common diseases of Aquarium fish.	SSN

6.	Jan	**6.Physico-chemical parameters of water for fish culture:** 6.1 Acidity, Alkalinity, Calcium, Nitrate, Ammonia, Total hardness **7. Fish preservation:** 7.1 Fish preservation and processing.	SSN
7.	Feb	**8.Fish breeding:** 8.1 Types of fish breeding - a) Natural fish breeding. b) Induced fish breeding	SSN

As per above mention theory syllabus of Semester I completed successfully. For completion of this syllabus 38 lectures are conducted.

Prof S.S. Naikare

K.T. S. P. Mandal's

Hutatma Rajguru Mahavidyalaya, Rajgurunagar.

Department of Zoology

Syllabus Completion report

A.Y.-2021-2022(Semester VI)

T.Y. B. Sc.

Course Title: Animal Physiology

Course Code: ZO-362

Month	Title	Teacher Name
April 2022	**1.Nutrition and digestion:** 1.1 Nutritional requirement & balanced diet. 1.2 Digestion and absorption of carbohydrates, proteins and lipids. 1.3 Vitamins - outline of fat soluble and water-soluble vitamins; Sources, deficiency and diseases.	SSN
April 2022	**2.Respiration:** 2.1 Mechanism of respiration: Regulation of ventilation in lungs, exchange of gases at respiratory surface. 2.2 Respiratory pigments in animals: Haemoglobin, Hemocyanin, Hemerythrin, Chlorocruorin. 2.3 Transport of gases : O2 and CO2 transport. **3.Circulation:** 3.1 Blood: Definition and its constituents, functions of blood. 3.2 Heart: Structure of human heart, Pace maker, Cardiac Cycle. 3.3 Origin and conduction of heart beat.	SSN
May 2022	**4. Excretion:** 4.1 Structure of Uriniferous tubule. 4.2 Mechanism of urine formation. 4.3 Normal and abnormal constituents of urine, Elementary idea of dialysis.	SSN
May 2022	**5.Muscles:** 5.1 Structure of smooth, skeletal and cardiac muscles. 5.2 Mechanism of muscle contraction by Sliding filament theory.	SSN
June 2022	**6.Reproduction and Endocrine Glands:** 6.1 Physiology of male reproduction, hormonal control of spermatogenesis. 6.2 Physiology of female reproduction, hormonal control of menstrual cycle.Structure and functions of pituitary, thyroid, parathyroid, pancreas and adrenal glands.	SSN

Naikade

Prof. S.S. Naikade

T.Y.B.Sc

Course Title: Evolutionary Biology

Course Code: ZO 366

Semester: VI

Month	Title	Teacher Name
March 2022	**1.Introduction:** 1.1 Concept of Evolution. 1.2 Origin of life. 1.3 Origin of eukaryotic cell (Origin of mitochondria, plastids & symbionts). **2. Evidences of Evolution:** 2.1 Analogy and Homology. 2.2 Embryological Evidences of Evolution. 2.3 Evolutionary & Paleontological Evidences.	SSN
April 2022	**3. Historical Review of Evolutionary Concept:** 3.1 Theories of Evolution. 3.2 Lamarckism. 3.3 Darwinism and Neo Darwinism. 3.4 Mutation Theory. 3.5 Modern Synthetic theory. **4. Sources of Variations:** 4.1 Variation and Mutations.	SSN
May 2022	**5. Isolation**	SSN
May 2022	**6.Speciation:** 6.1 Types of speciation (Allopatric & Sympatric). 6.2 Mechanism of speciation. 6.3 Patterns of speciation. 6.4 Factors influencing speciation.	SSN
May 2022	**7.Population Genetics:** 7.1 Hardy-Weinberg Law & Genetic Drift. 7.2 Types of Natural Selection.	SSN
May 2022	**8.Origin of Man:** 8.1 Evolution of Man (Evolution of anthropoids including man) - Kenyapithecus to Homo sapiens.	SSN
June 2022	**9.Zoogeographical Realms With reference to fauna:**	SSN
June 2022	**10.Extinctions:** 10.1 Extinction - An Overview.	SSN

As per mention above 75% syllabus is completed and remaining will be complete in first week of June.

Naikare

Prof. S.S. Naikare