

K.T. S. P. Mandal's
Hutatma Rajguru Mahavidyalaya, Rajgurunagar.
Department of Zoology
Teaching Plan
A.Y.-2022-2023 (Semester V)

T.Y.B. Sc.

Course Title:- Histology

Course Code: ZO – 352

Month	Topics	Teacher
Sept	1. Introduction: Definition and Scope of Histology. Definitions and Review of Types of Tissues: 2.1 Epithelial tissue. 2.2 Connective tissue. 2.3 Nervous tissue. 2.4 Muscular tissue.	SSN
Sept & Oct	3.Histological study of following mammalian organs: 3.1 Skin (V. S.). 3.2 Tooth (V. S.). 3.3 Tongue (C. S.) with reference to mucosa papillae and taste buds 4.Histological study of Alimentary canal and Liver: 4.1 Oesophagus (T. S.).4.2 Stomach (T. S.). 4.3 Duodenum (T. S.). 4.4 Rectum (T. S.). 4.5 Liver (C. S.).	SSN
Oct	5.Histological study of Respiratory organs: 5.1 Trachea (T. S.). 5.2 Lung (C. S.).	SSN
Oct	6. Histological study of Excretory organs: 6.1 Kidney (L. S.). 6.2 Juxta glomerular complex.	SSN
Nov	7.Histological study of Reproductive organs: 7.1 Testis (T. S.) with reference to Seminiferous Tubules and Cells of Leydig. 7.2 Ovary (C. S.).	SSN
Nov	8. Histology of Endocrine glands: 9. 8.1 Pituitary gland. 8.2 Thyroid gland. 8.3Adrenal gland. 8.4 Pancreas (C. S.) including both exocrine and endocrine components.	SSN



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T. Y.B. Sc.

Course Title: Aquarium management

Course Code: ZO – 3510

Month	Topic	Teacher
Sept	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
Sept	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
Sept & Oct	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
Oct	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
Oct & Nov	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
Nov	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
Nov	8.Fish breeding: 8.1 Types of fish breeding - a) Natural fish breeding. b) Induced fish breeding	SSN



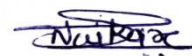
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Teaching Plan
A.Y.-2022-2023 (Semester VI)

T.Y. B. Sc.
Course Title: Animal Physiology
Course Code: ZO-362

Month	Title	Teacher Name
Feb	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
March	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 : O ₂ and CO ₂ 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
April	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
April	5. Muscles: 5.1 Structure of smooth, skeletal and cardiac muscles. 5.2 Mechanism of muscle contraction by Sliding filament theory.	SSN
May	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 & adrenal glands.	SSN



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T. Y. B. Sc

Course Title: Evolutionary Biology

Course Code: ZO 366

Month	Title	Teacher Name
Feb & March	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
March	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
April	5. Isolation	SSN
April	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
April	7.Population Genetics: 7.1 Hardy-Weinberg Law & Genetic Drift. 7.2 Types of Natural Selection.	SSN
May	8.Origin of Man: 8.1 Evolution of Man (Evolution of anthropoids including man) - Kenyapithecus to Homo sapiens.	SSN
May	9.Zoogeographical Realms With reference to fauna:	SSN
May	10. Extinctions: Extinction - An Overview.	SSN



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