#### K.T. S. P. Mandal's

# Hutatma Rajguru Mahavidyalaya, Rajgurunagar.

### **Department of Zoology**

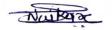
### **Teaching Plan**

## **A.Y.-2021-2022** (Semester V)

T.Y.B. Sc.

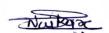
Course Title:- Histology Course Code: ZO – 352

Month	Topics	Teacher
Oct	<ol> <li>Introduction: Definition and Scope of Histology.</li> <li>Definitions and Review of Types of Tissues:</li> <li>2.1 Epithelial tissue.</li> <li>2.2 Connective tissue.</li> <li>2.3 Nervous tissue.</li> <li>2.4 Muscular tissue.</li> </ol>	SSN
Oct & Nov	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
Nov	<b>5.Histological study of Respiratory organs:</b> 5.1 Trachea (T. S.). 5.2 Lung (C. S.).	SSN
Nov & Dec	6. Histological study of Excretory organs: 6.1 Kidney (L. S.). 6.2 Juxta glomerular complex.	SSN
Dec	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
Jan	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



### T. Y.B. Sc.

Course Title: Aquarium management Course Code: ZO – 3		
Month	Topic	Teacher
Oct	<ul> <li>1.Introduction to Aquarium Fish Keeping:</li> <li>1.1 The potential scope of Aquarium Fish Industry as a Cottage Industry.</li> <li>1.2 Exotic and Endemic species of Aquarium Fishes.</li> <li>1.3 Nutritional value of fish</li> </ul>	SSN
Oct	<ul> <li>2.Introduction to Aquarium Fish Keeping:</li> <li>1.1 The potential scope of Aquarium Fish Industry as a Cottage Industry.</li> <li>1.2 Exotic and Endemic species of Aquarium Fishes.</li> <li>1.3 Nutritional value of fish</li> </ul>	SSN
Nov	<ul><li>3.Food and feeding of Aquarium Fishes:</li><li>3.1 Use of live fish feed organisms.</li><li>3.2 Preparation and composition of formulated fish feeds.</li><li>3.3 Overview on types of fish food.</li></ul>	SSN
Nov	<ul><li>4.Fish Transportation:</li><li>4.1 Live fish transport: a) Fish handling. b) Fish packing.</li><li>c) Fish forwarding techniques. 4.2 Causes of mortality in transport.</li></ul>	SSN
Dec	<ul> <li>5.Maintenance of Aquarium:</li> <li>5.1 General Aquarium Maintenance - budget for setting up an Aquarium.</li> <li>5.2 Fish Farm as a Cottage Industry, Rules &amp; regulations of fish rearing.</li> <li>5.3 Common diseases of Aquarium fish.</li> </ul>	SSN
Dec	<ul> <li>6.Physico-chemical parameters of water for fish culture:</li> <li>6.1 Acidity, Alkalinity, Calcium, Nitrate, Ammonia, Total hardness</li> <li>7.Fish preservation:</li> <li>7.1 Fish preservation and processing.</li> </ul>	SSN
Jan	8.Fish breeding: 8.1 Types of fish breeding - a) Natural fish breeding. b) Induced fish breeding	SSN





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## **Department of Zoology**

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

T.Y. B. Sc.

**Course Title: Animal Physiology** 

Course Code: ZO-362

Month	Title	Teacher Name
April	1.Nutrition and digestion:	SSN
	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.	
April	<b>2.Respiration:</b> 2.1 Mechanism of respiration: Regulation of ventilation in lungs,	SSN
&	exchange of gases at respiratory surface.	
May	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.	
May	<b>4. Excretion</b> : 4.1 Structure of Uriniferous tubule.	SSN
·	4.2 Mechanism of urine formation.	
	4.3 Normal and abnormal constituents of urine, Elementary idea of dialysis.	
June	<b>5.Muscles:</b> 5.1 Structure of smooth, skeletal and cardiac muscles.	SSN
	5.2 Mechanism of muscle contraction by Sliding filament theory.	
June	6.Reproduction and Endocrine Glands:	SSN
	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.	





## **T. Y. B. Sc**

Course Title: Evolutionary Biology Course Code: ZO 366

Month	Title	Teacher Name
A puil	1.Introduction:	Name
April	1.1 Concept of Evolution.1.2 Origin of life.	SSN
	1.3 Origin of eukaryotic cell (Origin of mitochondria, plastids & symbionts).	2211
	2. Evidences of Evolution:	
	2.1 Analogy and Homology.	
	2.2 Embryological Evidences of Evolution.	
	2.3 Evolutionary & Paleontological Evidences.	
April	3. Historical Review of Evolutionary Concept:	
	3.1 Theories of Evolution.3.2 Lamarckism.3.3 Darwinism and Neo	SSN
	Darwinism.3.4 Mutation Theory.3.5 Modern Synthetic theory.	
	4. Sources of Variations:	
	4.1 Variation and Mutations.	
May	5. Isolation	SSN
May	6.Speciation:	
	6.1 Types of speciation (Allopatric & Sympatric).	SSN
	6.2 Mechanism of speciation.6.3 Patterns of speciation.	
	6.4 Easters influencing appointion	
	6.4 Factors influencing speciation.	
May	7.Population Genetics:	
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