

K.T. S. P. Mandal's
Hutatma Rajguru Mahavidyalaya, Rajgurunagar
Department of Zoology.

Syllabus completion Report (A.Y.2022 – 2023)

S.Y. B. Sc. (Zoology)
Course Title: Animal Diversity - III
Course Code: ZO – 231

Sr.No	Month	Topics	Teacher
1	Sep	1. Introduction to Phylum Chordata – 1.1 Origin & Ancestry of Chordates. 1.2 Comparative account of fundamental characters of Chordates with Non Chordates. 1.3 Salient features of Phylum Chordata. 1.4 Classification of Phylum Chordata upto classes – Pisces, Amphibia, Reptilia, Aves, Mammalia.	DNB
2	Sep	2. Introduction to Group – Protochordata. 2.1 Salient features of Protochordata. 2.2 Salient features of subphylum with two example each - Names only. Hemichordata – <i>Balanoglossus</i> and <i>Rhabdopleura</i> , Urochordata - <i>Herdmania</i> and <i>Salpa</i> , Cephalochordata – <i>Branchiostoma</i> (Amphioxus) and <i>Asymmetron</i> .	DNB
3	Oct	3. Introduction to subphylum – Vertebrata 3.1 Salient features of Vertebrata. 3.2 Introduction and General characters of sections with two examples - Names only. Agnatha – <i>Petromyzon</i> & <i>Myxine</i> & Gnathostomata – Frog & <i>Labeo</i>	DNB
4	Oct	4. Introduction to Class – Pisces 4.1 Salient features of Class – Pisces. 4.2 Introduction and Salient features of sections with two examples - Names only. Class – Chondrichthyes – <i>Scoliodon</i> and <i>Chimaera</i> & Osteichthyes – <i>Labeo</i> and <i>Catla</i> 4.3 Types of Scales in Fishes. 4.4 Types of Fins in Fishes.	DNB

5	Nov	5. Introduction to Class – Amphibia 5.1 Salient features of Class – Amphibia. 5.2 Introduction to order – Apoda– <i>Ichthyophis</i> , Urodela– <i>Salamandra</i> (Salamander) & Anura - <i>Rana</i> . 5.3 Parental care in Amphibia.	DNB
6	Nov	6. Study of <i>Scoliodon</i> <i>Scoliodon</i> – 6.1 - Systematic position, Geographical distribution, Habit, Habitat 6.2 - External characters 6.3 - Digestive System, Food and feeding mechanism. 6.4 - Respiratory System – Structure of Holobranch only. 6.5- External & Internal Structure of heart, Working of heart. 6.6 - Nervous System – Brain only. 03 6.7 - Male urinogenital system & Female reproductive System. 6.8- Yolk sac placenta.	DNB

As per above mention 95% theory syllabus of Semester I completed and remaining will be complete in last week of November.



Prof. D.N. Birhade

S. Y. B. Sc.

Course Title: Animal Diversity - IV

Course Code: ZO – 241

Month	Title	Teacher Name
March & April	Introduction to class –Reptilia 1.1 Salient features of class Reptilia with one example (name only) – <i>Chelone, Calotes</i> . 1.2 Venomous and Non-venomous snakes – Cobra, Russell's viper, Rat snake, Grass snake. 1.3 Snake venom, symptoms, effect and cure of snake bite, first aid treatment of snakebite. 1.4 Desert adaptations in reptiles in brief.	DNB
April	Introduction to class –Aves 2.1 Salient features of class Aves with two examples (names only) – Sparrow, Parrot. 2.2 Flight adaptations in birds. 2.3 Types of Beaks and feet in birds. 2.4 Migration in birds – Altitudinal, Latitudinal	DNB
May	3. Introduction to class - Mammalia. 3.1 Salient features of class Mammalia with two examples (names only) – Rat, Rabbit. 3.2 Egg laying mammals. 3.3 Aquatic adaptations in mammals. 3.4 Flying adaptations in mammals. 3.5 Cursorial and fossorial adaptation in mammals	DNB
May	4. Study of Rat 4.1 Systematic position, habit and habitat. 4.2 External characters. 4.3 Digestive system, food and feeding. 4.4 Respiratory system. 4.5 Blood vascular system – Structure of Heart. 4.6 Nervous system – Central Nervous system only. 4.7 Sense organs – Structure and functions of Eye & Ear. 4.8 Reproductive system	DNB

As per mention above 80% Syllabus is completed. Remaining Syllabus will be complete in Last week of May.

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

T. Y. B. Sc. (Zoology)

Course Title: Genetics

Course code: ZO 354

Sr.No	Month	Topics	Teacher
1	Oct	1. Introduction to genetics: 1.1 Classical and Modern concept of Gene, Cistron, Muton, Recon. 1.2 Mendel's laws of Inheritance.	DNB
2	Oct	2 Exceptions to Mendelian Inheritance: 2.1 Incomplete dominance. 2.2 Co-dominance. 2.3 Multiple alleles: Concept, characteristics and importance of multiple alleles, ABO & Rh - blood group system and its medico legal importance. 2.4 Lethal alleles.	DNB
3	Oct & Nov	3. Gene Mutation: 3.1 Definition. 3.2 Types of mutations: spontaneous, induced, somatic, gametic, forward, reverse. Types of point mutation - deletion, insertion, substitution, transversion, transition. 3.3 Mutagenic agents a) UV radiation and ionising radiation. b) Base analogs, alkylating and intercalating agents.	DNB
4	Nov	4. Sex-determination: 4.1 Introduction. 4.2 Types of sex determination: -XX-XY, ZZ-ZW, XX-XO and Parthenogenesis, Hypodiploidy. 4.3 Gynandromorphism.	DNB
5	Nov	5. Population Genetics: 5.1 Basic Concepts in population genetics: Mendelian population, gene pool, gene / allele, Frequency, chance mating (Panmictic mating). 5.2 Hardy Weinberg law and its equilibrium.	DNB
7	Nov	7. Sex linked inheritance in human: 7.1 Colour – blindness. 7.2 Haemophilia. 7.3 Hypertrichosis.	DNB

8	Nov	8. Application of genetics: 8.1 Genetic counselling. 8.2 Diagnostics & breeding technology.	DNB
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As per above mention 95% theory syllabus of Semester I completed and remaining will be complete in last week of November.



Prof. D. N. Birhade

T. Y. B. Sc.

ZO 361 - Medical & Forensic Zoology

Month	Title	Teacher Name
March	1. Introduction to medical zoology and its importance : 2. Medico-legal Autopsy: 2.1 Death and its Causes- External examination of deceased body – Internal Examination - Determination of time since death and cause of death. 2.2 Injuries – Classification - Medico-legal aspects of injuries. 2.3 Post-mortem changes - collection of post-mortem samples and Preservation. 3. Urine Analysis: 3.1 Physical characteristics, abnormal constituents, renal failure, renal calculi, dialysis.	DNB
April	4. Non infectious Diseases: 4.1 Causes, Types, Symptoms, Complications, Diagnosis and Prevention of Diabetes (Type I and II), Hypertension, Hypotension, Obesity, Atherosclerosis, Myocardial Infraction. 5. Infectious Diseases: 5.1 Causes, Types, Symptoms, Complications, Diagnosis and Prevention of Tuberculosis and Hepatitis.	DNB
April	6. Introduction to Forensic Zoology: 6.1 Definition, Scope and Application of Forensic Zoology. 6.2 Forensic Laboratories in India. 6.3 Basic Principles of Forensic Science with Examples. 7. Forensic Medicine: 7.1 Introduction to Forensic Medicine: Definitions of Forensic Medicine. 7.2 Medical Jurisprudence. 7.3 Medical evidence documentations.	DNB
May	Forensic Analysis: 8.1 Examination of Biological Materials: Examination of Hair, Fibres, Diatoms, plants materials, human tissues. 8.2 Examination of Body Fluid: Blood, Semen and Saliva. 8.3 Forensic Importance of Insects: Insects of forensic importance - indicators of time of death stages of insect development & comparative decomposition of human body - colonization - Evidence collection of insects – Territorial & Aquatic Insects. 8.4 DNA Fingerprint Technique and Examination of Biological Traces: Liquid blood, blood stains, & swabs, semen, Seminal stains, tissues, Bones, Hairs, Teeth, Saliva, Skeletal remains. 8.5 Toxicological Investigations: Poisons – Definition, Forms of Poison –	DNB

Physical, Chemical & Mechanical state. Introduction with examples of – Neurotoxic Poisons – Cerebral & Spinal, Cardiovascular Poisons, Asphyxiants, Miscellaneous poisons – Pesticides, Pharmaceutical drugs, Petroleum poisons, Food poisons, Radioactive poisons.	
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Last week of May.**

