R. L. S. Y. COLLEGE, RANCHI

DEPARTMENT OF ZOOLOGY

ACADEMIC CALENDER

B.Sc. ZOOLOGY

Course Instructor: Madhuri Kumari Das (Assistant Professor)

Session: 2018-21

Semester-V

Month	Lesson Plan (theory/ Practical)	Status
February	DNA replication in Prokaryotes and Eukaryotes, mechanism of DNA replication, mutation and its types, detection of mutation	Completed
March	Insect society, Group of social insects and their social behavior and social organization, Physiology of Insect, Growth and metamorphosis	Completed

Semester-VI

Month	Lesson Plan (theory/ Practical)	Status
April	Fish in Research, Transgenic fish, Zebrafish as a model in research, Inland Fisheries, Marine fisheries, Fisheries laws and regulation	Completed
May	Overview of Immunology, Cells and organs of Immune system, Innate and adaptive immunity, Antigens, Antigenicity and immunogenicity	Completed
June	Early embryonic development, Metamorphosis, Gametogenesis, Spermatogenesis, Extra embryonic membrane	Completed

July	Phylogenetic trees, Multiple sequence alignment, Construction of phylogenetic trees, RNA world, Biogeny	Completed
August	Study of whole mount of developmental stages of Chick embryo, Hardy-Weinberg Law, Natural selection, Mutation	Completed
September	Evidence of evolution, Fossil record, geological time scale, Major histocompatibility complex, Antigen presentation	Completed

Session: 2019-22

Semester-IV

Month	Lesson Plan (theory/ Practical)	Status
February	Overview of metabolism, catabolism vs Anabolism, Stages of catabolism, Shuttle system and membrane transport	Completed
March	Carbohydrate metabolism, Glycolysis and its regulation, Citric acid cycle, Pentose phosphate pathway	Completed
April	Protein metabolism, Transamination, Deamination, Urea cycle, ETS system	Completed
May	Renal physiology, Structure of kidney and its functional unit, Mechanism of urine formation	Completed
June	Physiology of heart, Cardiac cycle, Blood pressure and its regulation, ECG	Completed

Semester-V

Month	Lesson Plan (theory/ Practical)	Status

July	Nucleic acids, Salient features of DNA and RNA, Watson and Crick model of DNA	Completed
August	DNA replication in Prokaryotes and Eukaryotes, mechanism of DNA replication, mutation and its types, detection of mutation	Completed
September	Polygenic Inheritance, Transposable genetic elements, Extra chromosomal inheritance, Co-dominance and Incomplete dominance	Completed
October	DNA repair mechanism, Pyramidine dimerization and mismatch repair	Completed
November	Introduction to endocrinology, Classification, Characterization and transport of hormones, Regulation of hormone action	Completed
December	Insect society, Group of social insects and their social behavior and social organization, Physiology of Insect, Growth and metamorphosis	In continuation

Session: 2020-23

Semester-I

Month	Lesson Plan (theory/ Practical)	Status
February	Phylum Porifera; General characteristics and classification upto class; Canal system	Completed
March	Phylum Cnideria; General characteristics and classification upto class; Metagenesis in *Obelia*; Polymorphism in Cnideria; Coral and coral reefs	Completed
April	Phylum Platyhelminthes; General characteristics and classification upto class; Life cycle, pathogenicity of *Taenia solium*	Completed

May	Community, Species richness, dominance	Completed
June	Diversity, abundance, vertical stratification, ecotone, edge effect	Completed
July	Ecological succession with one example, Theories of climax community	Completed
August	History of Ecology, Autecology and synecology, levels of organization, Laws of limiting factors	Completed

Semester-II

Month	Lesson Plan (theory/ Practical)	Status
September	Overview of cells, Prokaryotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions	Completed
October	Cell division, Meiosis, Mitosis, Cell cycle and its regulation	Completed
November	Cell signaling, GPCR and role of second messenger	Completed
December	Plasma membrane, Phylum Arthropoda, Phylum Echinodermata, Phylum Annelida	In continuation

Session: 2021-24

Semester-I

Month	Lesson Plan (theory/ Practical)	Status
December	Kingdom Protista, Parazoa and Metazoa, General characteristics and classification upto class; Study of *Euglena, Amoeba* and *Paramecium*; Life cycle, Pathogenicity of *Plasmodium vivax* and *Entamoeba histolytica*	In continuation