

SHRI GULAB SINGH GOVERNMENT DEGREE COLLEGE CHAKRATA (D.DUN)

DEPARTMENT OF ZOOLOGY

COURSE OUTCOME AND PROGRAM OUTCOME

COURSE OUTCOME

B.Sc. first year

Paper I- Animal diversity- Non chordata

- Salient features and outline classification (up to Classes) of various Lower Non-chordate Phyla.
- General account of Protozoa and porifera with particular reference.
- Polymorphism in Coelenterates and brief account of Corals and Coral reefs.
- General characters and parasitic adaptations in Helminths.
- larval form/s, and metamerism in Annelida.
- General features of Arthropoda and Mollusca with reference to features and torsion.
- Echinodermata with reference to general features and water vascular system.

Paper II- Cell Biology and Genetics

- Introduction to cell biology, comparative knowledge of prokaryotic and eukaryotic cells.
- Elementary knowledge of the structure & functions of plasma membrane and different organelles constituting endomembrane system (Endoplasmic reticulum, Golgi complex, Lysosome & Peroxisome).
- Elementary knowledge of the structure & Functions of Nucleus & nucleolus; Ribosome; Mitochondria. Basic concept of cytoskeleton.
- Elementary knowledge of Cell Division-Mitosis & Meiosis and cell cycle cell transformation and cancer.
- A basic understanding of eukaryotic chromosomes. unienemic and multinemic concept of chromosome structure and giant chromosomes.
- Describe Mendelian inheritance/genetics, Linkage, Crossing-over mechanism and significance.
- Determination of sex- and Sex-linked inheritance.


Paper III- Taxonomy Evolution and Computer

- Taxonomy and systematics, their relationship and significance.
- Species concept and back ground knowledge of taxonomic methodology.
- concepts and evidences of evolution.
- Evolutionary theories and evolution of man.
- Elementary knowledge of fossils and geological time scale.

Program out comes

It will help the students to develop the basis of animal diversity and its development which can generate various academic research and various other jobs in the field of cell biology and medical labs.


Co-ordinator
IQAC
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श्री गुलाब सिंह राजकीय महाविद्यालय
चकराता (देहरादून)

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DEPARTMENT OF ZOOLOGY

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COURSE OUT COME

B.Sc. Second year

Paper I- Chordata

- Salient features and Phylogeny of Protochordates with body organization of Balanoglossus, Herdmania & Amphioxus.
- Salient features & classification of Agnatha and comparison of Lampreys and Hagfish.
- Understanding of scales, fins and Hill stream adaptation in fishes.
- Classification of class Amphibia and reptiles up to orders. Parental care and neoteny in Amphibia.
- Identification of Poisonous and non-poisonous snakes and biting mechanism in snakes.
- Description of feathers in Aves their classification and adaptations for aerial mode of life.
- General features of Class Mammalia (Prototheria, Metatheria and Eutheria). Aerial and aquatic adaptations in mammals and origin of man.

Paper II- Animal Physiology and Biochemistry


- A basic understanding of the process of digestion and absorption.
- A basic understanding of pulmonary ventilation, respiratory volumes and capacities and control of respiration.
- A basic understanding of Transportation of oxygen and carbon dioxide.
- A basic knowledge of mechanism of blood coagulation and Structure and function of heart.
- A basic understanding of Physiology of urine formation.
- A basic understanding of structure, types of neurons and function of neurons.
- A basic understanding of synapse and nerve impulse transmission.
- A basic understanding of structure and types of muscles.
- A basic understanding of molecular and chemical basis of muscle contraction.
- A basic understanding of carbohydrate, lipids and protein metabolism.
- A basic understanding of types, properties and functions of enzymes.

Paper III- Molecular Biology, Biotechnology and Microbiology

- Basic understanding of DNA, nucleoside, nucleotide and polynucleotide chain.
- Understanding of DNA as genetic material, its packaging and types of DNA.
- A basic understanding of DNA damage and mechanism of DNA repair.
- A basic understanding of Clover leaf model of tRNA.
- A basic understanding of transcription mechanism in prokaryotes.
- A basic understanding of processing of pre-mRNA


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- brief background knowledge of biotechnology.
- A basic understanding of recombinant technology and DNA fingerprinting.
- A basic understanding of PCR and its significance.
- A brief knowledge of biotechnological innovations.
- A basic understanding of Cyanobacteria, fungi, yeast and viruses.
- A basic understanding of structure, classification, nutrition and reproduction in Bacteria.

Program outcomes

It will enhance the basic knowledge about the different system of an organism and their functioning. Students Comes to know about the clinical bases of biomolecules and their importance in human life. Students learned about advanced technology, about microbes their uses It will help students to generate employment in the field of clinical and medical lab, pharma companies, technical field and forensic field.


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