

TELANGANA SOCIAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN MANCHERIAL

DEPARTMENT OF ZOOLOGY : B.Sc (BZC & MZC)

PROGRAMME OUTCOMES

The student will be able to:

- Acquire the knowledge with facts and figures related to Zoology
- Understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life.
- Acquire the skills in handling scientific instruments, planning and performing in laboratory experiments
- Analyze the given scientific data critically and systematically and the ability to draw the objective conclusions.
- Think creatively to propose novel ideas in explaining facts and figures or providing new solution to the problems.
- Develop scientific outlook not only with respect to science subjects but also in all aspects related to life.
- Imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.
- Develop various communication skills such as reading, listening, speaking, etc., which will help in expressing ideas and views clearly and effectively.
- Develop flair by participating in various social and cultural activities voluntarily, in order to spread knowledge, creating awareness about the social evils, blind faith, etc.
- Effectively use the basic IT skills for effective presentation and communication of ideas.

PROGRAMME SPECIFIC OUTCOMES

1. Acquire basic knowledge of various disciplines of Zoology and General Biology meant both for a graduate terminal course and for higher studies.
2. Inculcate interest in nature and love of nature.
3. Understand the rich diversity of organisms and their ecological and evolutionary significance
4. Imbibe basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation
5. Create awareness on the internal harmony of different body systems and the need for maintaining good health through appropriate lifestyle.
6. Acquire basic knowledge and skills in certain applied branches for self employment
7. Impart awareness of the conservation of the biosphere.

COURSE OUTCOMES

ANIMAL DIVERSITY INVERTEBRATES

- To create an awareness on the basic philosophy of science, concepts and scope
- To understand different levels of biological diversity through the systematic classification
 - To understand the evolutionary significance of invertebrate fauna
- Knowledge of historical account of taxonomy and classification of animals.
- Understand the concept of species.
- Developed the knowledge of Taxonomy and systematics and also taxonomic hierarchy
- Gain knowledge about the International code of Zoological Nomenclature
- Knowledge about structure, physiology, life history and pathogenicity of particular species like *Entamoeba histolytica*, *Trypanosoma gambiense*, *Plasmodium vivax* and *Plasmodium falciparum*, etc.

ANIMAL DIVERSITY –CHORDATA

- To acquire in depth knowledge on the diversity of chordates and their systematic position
- To understand the evolutionary significance of vertebrates Improved knowledge about the structural organization of Hemichordata, Urochordata and Cephalochordata.
- . Knowledge about the affinities of Amphioxus.
- Understand the external features, digestive system and reproductive system of Petromyzon (Circular mouth fishes)
- . Analyze external feature, respiratory system, reproductive system, brain and cranial nerves of Scoliodon.
- . Gain the specific knowledge about air bladder, accessory respiratory organ of fishes.
- . Concepts on general characters and distribution of lung fishes (Dipnoi) in the world
- . Knowledge about the origin of birds, distinctive characters and classification upto order with examples of the class Aves.
- Differentiate about feather, digestive, respiratory, circulatory, urinogenital and skeletal system of Pigeon.
- Compare the distinctive characters of Ratitae and Carinatae.
- Understand the characters of the fossil of Archaeopteryx.

ANIMAL PHYSIOLOGY, ANIMAL BEHAVIOUR

- Defining and explaining the basic principles of biochemistry useful for biological studies for illustrating different kinds of food, their structure, function and metabolism.
- Explaining various aspects of physiological activities of animals and their hormonal control with special reference to humans

Develop understanding for the fundamental concept of physiology of nutritional requirements, digestion and absorption.

- . Develop understanding of structure of heart and blood vascular system.
- Develop the fundamental concepts of physiology of respiration.
- Understanding of fundamental concepts of excretion.

- . Familiarize students with physiology of nerves and sense organs.
- . Gain knowledge about the physiology of muscle.

Students gain knowledge about the concept of endocrine glands and role of neurosecretory cells in nervous functions.

Understand about the specific functions of different hormones which secreted from various endocrine glands.

- Acquire fundamentals knowledge about the hyper and hypo secretion of hormones of various endocrine glands with their effects.
- Familiarize the importance of endocrine glands like pineal, hypothalamus, pituitary, thyroid, parathyroid and thymus etc.
- Understand the concept of Islets of Langerhans, Testis and Ovary.
- Attained knowledge about the particular hormones and their functions secreted from extra- exocrine glands like gastrointestinal system, Kidney, Placenta and Heart etc.

CELL BIOLOGY AND GENETICS DEVELOPMENTAL BIOLOGY

- To identify the various developmental stages and the possible defects in growth
- To provide the students with the periodic class discussions of current events in science which will benefit them in their future studies in the biological/physiological sciences and health-related fields Provide insights on gene expression and its regulation
- To understand the structure and function of the cell and organelles as the fundamentals for understanding the functioning of all living organisms.
- To emphasize the central role of genes and their inheritance in the life of all organisms


IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY

- To explain the mechanism of immunity and the role of hormones
- Understand the structure and function of Immunoglobulins
- Differentiate lymphoid organs.
- Compare organs involved in transplantation and its association with rejection.

- Understand the role of Vectors such as Cosmids,, Pasmids and Bacteriophages
- Understand the role of Plasmids
- Write the steps of r- DNA technology
- Application of Stem Cells in day to day life

ECOLOGY , ZOOGEOGRAPHY& EVOLUTION

- To define Ecosystem, Study ecosystems
- Understand the factors associated with ecosystem, associations, Energy levels
- Comprehend Biogeochemical cycles
- Understand the concept of Ecosystem
- Define Food chain, energy flow, ecological niche, biosphere and biomes of the world.
- Understand about the environmental pollution. Causes, control and prevention of pollution.
- Analyze the toxic effects of Pesticides and industrial wastes and biomagnification
- To study the distribution of animals on earth, its pattern, evolution theories of Evolution and causative factors
- Wildlife of India with particular reference different methods adopted in wildlife census.
- Concept of wildlife conservation and biotechnological intervention. Classify animals in different Geographical realms of World
- Knowledge about the different Sanctuaries, National parks and Ramsar sites of India


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