**GDC PORUMAMILLA**

 **DEPARTMENT OF ZOOLOGY**

 **ZOOLOGY COURSE OUTCOME**

 **GDC PORUMAMILLA**

 **DEPARTMENT OF ZOOLOGY**

 **COURSE OUTCOMES**

**SEMESTER –I**

**PAPER – I: ANIMAL DIVERSITY – BIOLOGY OF NONCHORDATES**

**Course Outcomes:**

**CO1 Describe general taxonomic rules on animal classification**

**CO2 Classify Protozoa to Coelenterata with taxonomic keys**

**CO3 Classify Phylum Platyhemninthes to Annelida phylum using examples from parasitic adaptation and vermincomposting**

**CO4 Describe Phylum Arthropoda to Mollusca using examples and importance of insects and Molluscans**

**CO5 Describe Echinodermata to Hemichordata with suitable examples and larval stages in relation to the phylogeny**

**SEMESTER –II**

**PAPER – II: ANIMAL DIVERSITY – BIOLOGY OF CHORDATES**

**Course Outcomes:**

**By the completion of the course the graduate should able to –**

**CO1 Describe general taxonomic rules on animal classification of chordates**

**CO2 Classify Protochordata to Mammalia with taxonomic keys**

**CO3 Understand Mammals with specific structural adaptaions**

**CO4 Understand the significance of dentition and evolutionary significance**

**CO5 Understand the origin and evolutionary relationship of different phyla from Prochordata to mammalia.**

**SEMESTER –III**

**PAPER – III: CELL BIOLOGY, GENETICS, MOLECULAR BIOLOGY AND EVOLUTION**

**Course Outcomes:**

**The overall course outcome is that the student shall develop deeper understanding of what life is and how it functions at cellular level. This course will provide students with a deep knowledge in Cell Biology, Animal Biotechnology and Evolution and by the completion of the course the graduate shall able to –**

**CO1 To understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.**

**CO2 Describe fine structure and function of plasma membrane and different cell organelles of eukaryotic cell.**

**CO3 To understand the history of origin of branch of genetics, gain knowledge on heredity, interaction of genes, various types of inheritance patterns existing in animals**

**CO4 Acquiring in-depth knowledge on various of aspects of genetics involved in sex determination, human karyotyping and mutations of chromosomes resulting in various disorders**

**CO5 Understand the central dogma of molecular biology and flow of genetic information from DNA to proteins.**

**CO6 Understand the principles and forces of evolution of life on earth, the process of evolution of new species and apply the same to develop new and advanced varieties of animals for the benefit of the society**

**SEMESTER IV**

**PAPER – IV: ANIMAL PHYSIOLOGY, CELLULAR METABOLISM AND**

**Course Outcomes:**

**This course will provide students with a deep knowledge in Physiology, Cellular metabolism and Molecular Biology and by the completion of the course the graduate shall able to –**

**CO1 Understand the functions of important animal physiological systems including digestion, cardio-respiratory and renal systems.**

**CO2 Understand the muscular system and the neuro-endocrine regulation of animal growth, development and metabolism with a special knowledge of hormonal control of human reproduction.**

**CO3 Describe the structure, classification and chemistry of bio -molecules and enzymes responsible for sustenance of life in living organisms.**

**CO4 Develop broad understanding the basic metabolic activities pertaining to the catabolism and anabolism of various biomolecules.**

**CO5 Describe the key events in early embryonic development starting from the formation of gametes upto gastrulation and formation of primary germ layers.**

**PAPER – V: IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY**

**Course Outcomes:**

**This course will provide students with a deep knowledge in immunology, genetics, embryology and ecology and by the completion of the course the graduate shall able to –**

**CO1 To get knowledge of the organs of Immune system, types of immunity, cells and organs of immunity.**

**CO2 To describe immunological response as to how it is triggered (antigens) and regulated (antibodies)**

**CO3 Understand the applications of Biotechnology in the fields of industry and agriculture including animal cell/tissue culture, stem cell technology and genetic engineering.**

**CO4 Get familiar with the tools and techniques of animal biotechnology.**

**SEMESTER- V**

**Course 6B: LIVE STOCK MANAGEMENT**

 **(BIOLOGY OF DAIRY ANIMALS)**

**Course Outcomes:**

 **This course will provide students with a deep knowledge in breeds for rearing, let down of milk, cattle behavior at reproduction, economics and various breeding techniques by the completion of the course the graduate shall able to –**

 **CO1 Understand the select of suitable breeds of livestock for rearing.**

 **CO2 Understand the relate of anatomy of udder with let down of milk.**

 **CO3 Understand the identify and manipulate the reproductive behavior of cattle.**

 **CO4 Understand to inspect economics of dairy farming.**

 **CO5 Understand the apprise the various breeding techniques employed in livestock.**

**Course 7B: LIVE STOCK MANAGEMENT –I**

**(DAIRY PRODUCTION ANDMANAGEMENT)**

**Course Outcomes:**

**This course will provide students with a deep knowledge in dairy farming, management of dairy,pasteurization of milk and cream preparation from milk**

 **CO1 Understand Identify and suggest the suitable housing system for the dairy farming**

 **CO2 Understand Understand management practices for the dairy farming**

**CO3 Understand Learn the process of milk pasteurization**

**CO4 Understand Prepare cream from milk**