ZOOLOGY (XL-L)

General Aptitude

Verbal Ability: English grammar, sentence completion, verbal analogies, word groups,instructions, critical reasoning and verbal deduction.
Numerical Ability: Numerical computation, numerical estimation, numerical reasoning and data interpretation.

Animal world

Animal diversity, distribution, systematics and classification of animals, phylogenetic relationships.

Evolution

Origin and history of life on earth, theories of evolution, natural selection, adaptation, speciation.

Genetics

Basic Principles of inheritance, molecular basis of heredity, sex determination and sex-linked characteristics, cytoplasmic inheritance, linkage, recombination and mapping of genes in eukaryotes, population genetics.

Biochemistry and Molecular Biology

Nucleic acids, proteins, lipids and carbohydrates; replication, transcription and translation; regulation of gene expression, organization of genome, Kreb's cycle, glycolysis, enzyme catalysis, hormones and their actions, vitamins.

Cell Biology

Structure of cell, cellular organelles and their structure and function, cell cycle, cell division, chromosomes and chromatin structure.

Gene expression in Eukaryotes

Eukaryotic gene organization and expression (Basic principles of signal transduction).

Animal Anatomy and Physiology

Comparative physiology, the respiratory system, circulatory system, digestive system, the nervous system, the excretory system, the endocrine system, the reproductive system, the skeletal system, osmoregulation.

ZOOLOGY (XL-L)

Parasitology and Immunology

Nature of parasite, host-parasite relation, protozoan and helminthic parasites, the immune response, cellular and humoral immune response, evolution of the immune system.

Development Biology

Embryonic development, cellular differentiation, organogenesis, metamorphosis, genetic basis of development, stem cells.

Ecology

The ecosystem, habitats, the food chain, population dynamics, species diversity, zoogerography, biogeochemical cycles, conservation biology.

Animal Behaviour

Types of behaviours, courtship, mating and territoriality, instinct, learning and memory, social behaviour across the animal taxa, communication, pheromones, evolution of animal behaviour.

****