

## **SYLLABUS**

### **BIOLOGY**

#### **(Zoology and Botany):**

1. Diversity of the living world.
2. Structural organization in plants & animals.
3. Structural & functional organization of cell.
4. Plant physiology.
5. Human Biology.
6. Sexual reproduction.
7. Genetics.
8. Biology in human welfare.
9. Principles of biotechnology.
10. Ecology
11. Invertebrates and chordates, functional approach and animal taxonomy.
12. Cell biology and principles of genetics.
13. Biochemistry.
14. Sericulture and Vermiculture.
15. Environmental biology.
16. Biotechnology and Immunology.
17. Animal Physiology.
18. Pollution Ecology, Human Rights
19. Systematic, Biodiversity & Evolution
20. Developmental Biology and Applied Entomology
21. Microbiology, Vector Biology.
22. Medical Laboratory Techniques.
23. Research Methodology and Bio-Techniques.
24. Metabolism, Molecular Cell Biology
25. Computational Biology, Biostatistics, and Bioinformatics.
26. Parasitology, chronology, structure and function of genes, animal behavior.
27. Endocrine Physiology, Insect Physiology, Insect Toxicology, Diversity, and Behavior of Fishes.
28. Aquatic resources and their conservation, genomics, microbiome.
29. RNA Biology, Apy Genetics, and transgenerational inheritance.
30. Neuroendocrinology, biology of pregnancy, parturition, and lactation.
31. Molecular endocrinology and reproduction.
32. Mendelian vs. non-Mendelian inheritance
33. Microbiogenetics, Eukaryotic Genomes, Genetic Mapping, Cytogenetics, Crop Genetics
34. General properties of viruses and viral genomes, plant viruses, viroids, and other subviral entities; cyto-phage;

micro-phase; phycology.

35. Biology of archegoniate, plant systematics
36. Cell and molecular biology, evolutionary biology, developmental biology of plants
37. Recombinant DNA technology and proteomics
38. Pathogens and pests of crop plant
39. Algae, plant physiology, biochemistry, landscape ecology, and agricultural ecology
40. Reproductive biology of flowering plants
41. Molecular interactions of plants with symbionts, pathogens, and pests
42. In vitro technology, plant diversity, gymnosperm, angiosperm taxonomy, silviculture
43. Pharmacognosy, remote sensing, and physiogeography

### **Teaching Education and Methodology**

1. Learning & Teaching
2. Language across the curriculum
3. Understanding discipline and subject
4. Gender school and Society
5. Pedagogy of a school subject
6. Knowledge and curriculum
7. Assessment for learning
8. Creating an inclusive school
9. Childhood and growing up
10. Drama and Art in Education