SYLLABUS- 2020 - 2021

STANDARD: 12 **SUBJECT: BIO-ZOOLOGY - (THEORY)**

UNITS	CONTENT
1 Reproduction in Organisms	Introduction 1.1. Mode of Reproduction 1.3 Sexual reproduction
2 Human Reproduction	Introduction 2.1. Human Reproductive system 2.2. Gametogenesis 2.4. Fertilization and Implantation 2.5 Maintenance of pregnancy and Embryonic development
3 Reproductive Health	Introduction 3.1. Need for reproductive Health problems and strategies 3.2. Amniocentesis and its statutory Ban 3.3. Social impact of sex ratio - female foeticide and infanticide 3.4. Population explosion and Birth control 3.8. Assisted Reproductive Technology(ART) 3.9. Detection of foetal disorders during early Pregnancy
4 Principles of Inheritance and Variation	Introduction 4.1. Multiple alleles 4.2. Human blood groups 4.3. Genetic control of Rh factor 4.4. Sex determination 4.5. Sex linked inheritance 4.6. Karyotyping 4.7. Pedigree analysis
5 Molecular Genetics	Introduction 5.1. Gene as the functional unit of Inheritance 5.2. In search of Genetic material 5.3. DNA is the Genetic Material 5.5. RNA - World 5.6 Properties of genetic Material 5.7. Packaging of DNA helix 5.9. Transcription 5.10. Genetic Code 5.12. Translation

	5.13 Regulation of gene Expression 5.14. Human genome project 5.15. DNA finger printing Technique
6 Evolution	Introduction 6.1 Origin of life 6.2. Geological Time Scale 6.3. Biological evolution 6.5. Theories of biological evolution 6.7. Hardy- Weinberg Principle
7 Human Health and Diseases	Introduction 7.1 Common diseases in Human beings 7.2 Maintenance of Personal and Public Hygiene 7.3 Basic conceptsof Immunology 7.6 Adolescence - Drug and Alcohol abuse 7.7. Mental health and Depression
8 Microbes in Human Welfare	Introduction 8.2 Microbes in industrial products 8.3 Microbes in sewage treatment 8.5 Bioremediation
9 Applications of Biotechnology	Introduction 9.1. Applications in medicine 9.2. Gene therapy 9.3. Stem cell therapy 9.4. Molecular Diagnostics
11 Organisms and Populations	Introduction 10.1 Organisms and its environment 10.3. Major Abiotic components or factors 10.7 Populations 10.8 Population Attributes 10.12 Population Interaction
11 Biodiversity and Its Conservation	Introduction 11.1 Biodiversity 11.2 Importance of Biodiversity -Global and India 11.5 Causes of biodiversity loss 11.7 Biodiversity and its Conservation
12 Environmental Issues	Introduction 12.1 Pollution 12.6. Bio Magnification 12.7. Eutrophication 12.8. Organic farming and its Implementation 12.9 Solid Waste Management 12.10. Ecosan Toilets

PRACTICALS

STD: 12 **SUBJECT : BIO-ZOOLOGY**

Sl.No	Topic
1	Marking of wild life sanctuary and National parks in India Map
2	Human Mendelian traits
3	Human Sperm
4	Human Ovum
5	Paramecium Conjugation
6	Entamoebahistolytica
7	Thymus T.S
8	Lymph node
9	tRNA
10	Homologous organs
11	Analogous organs
12	X linked Disease
13	Autosomal Disease