

**SYLLABUS-2020 -2021**

**STANDARD: 12**

**SUBJECT: ZOOLOGY**

UNITS	CONTENT
<b>1 Reproduction in Organisms</b>	Introduction 1.1. Mode of Reproduction 1.3 Sexual reproduction
<b>2 Human Reproduction</b>	Introduction 2.1. Human Reproductive system 2.2. Gametogenesis 2.5. Fertilization and Implantation 2.6. Maintenance of pregnancy and Embryonic development
<b>3 Reproductive Health</b>	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
<b>4 Principles of Inheritance and Variation</b>	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 4.10. Extra chromosomal inheritance 4.11. Eugenics, Euphenics and Euthenics
<b>5 Molecular Genetics</b>	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
<b>6 Evolution</b>	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
<b>7 Human Health and Diseases</b>	Introduction 7.1. Common diseases in human beings 7.2. Maintenance of personal and public hygiene 7.3. Adolescence -Drug and Alcohol abuse 7.4. Mental health depression
<b>8 Immunology</b>	Introduction 8.1. Basic concepts of Immunology 8.2. Innate immunity 8.3. Acquired immunity 8.4. Immune responses 8.5. Lymphoid organs 8.6. Antigens 8.7. Antibodies 8.8. Antigen - Antibody interaction 8.9. Vaccines 8.10. Vaccination and Immunization 8.11. Hypersensitivity
<b>9 Microbes in Human Welfare</b>	Introduction 9.2. Microbes in industrial products 9.3. Microbes in sewage treatment 9.5. Bioremediation
<b>10 Applications of Biotechnology</b>	Introduction 10.1. Applications in medicine 10.2. Gene therapy 10.3. Stem cell therapy 10.4. Molecular Diagnostics 10.5. Transgenic Animals 10.6. Biological Products and their uses

<b>11 Organisms and Populations</b>	Introduction 11.1 Organisms and its environment 11.3. Major Abiotic components or factors 11.7 Populations 11.8 Population Attributes 11.12 Population Interaction
<b>12 Biodiversity and Its Conservation</b>	Introduction 12.1. Biodiversity 12.2. Importance of Biodiversity -Global and India 12.5. Causes of biodiversity loss 12.7. Biodiversity and its Conservation
<b>13 Environmental Issues</b>	Introduction 13.1 Pollution 13.6. Bio Magnification 13.7. Eutrophication 13.8. Organic farming and its Implementation 13.9 Solid Waste Management 13.10 Ecosan Toilets

## PRACTICALS

STD: 12

SUBJECT : 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	<i>Paramecium</i> - Conjugation
6	<i>Entamoeba histolytica</i>
7	Thymus T.S
8	Lymph node
9	Mutualism
10	Commensalism
11	tRNA
12	Homologous organs
13	Analogous organs
14	Animal cloning
15	X linked Disease
16	Autosomal Disease