

**Class – XII**  
**REVISED SYLLABUS**  
**(For the Session of 2020-21 Only)**  
**Biology**  
**(THEORY)**

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**UNIT-I**

**I REPRODUCTION**

***Reproduction in organisms*** : Sexual reproduction in flowering plants : Structure of flower, pollination, fertilization, development of seeds and fruits, apomixis and polyembryony.

***Human reproduction*** : Reproductive system in male and female, menstrual cycle, production of gametes, fertilization, implantation, embryo development, pregnancy, parturition and lactation.

***Reproductive Health*** : Population and birth control, contraception and MTP; sexually transmitted diseases, infertility.

**UNIT-II**

**II GENETICS AND EVOLUTION**

Mendelian inheritance.

Chromosome theory of inheritance, deviations from Mendelian ratio (gene interaction-incomplete dominance, co-dominance, multiple alleles).

Sex determination in human beings: XX, XY.

Linkage and crossing over.

Inheritance pattern : Mendelian disorders and chromosomal disorders in humans.

DNA and RNA, search for genetic material, replication, transcription, genetic code, translation.

Gene expression and regulation.

Genome and Human Genome Project.

DNA fingerprinting.

**UNIT -III**

**III BIOLOGY AND HUMAN WELFARE**

Basic concepts of immunology, vaccines.

Pathogens, Parasites

Cancer and AIDS

Adolescence and drug / alcohol abuse.

Mircobes in household food processing, industrial production, sewage treatment, energy generation, biocontrol agents and biofertilizers.

**UNIT -IV**

**IV BIOTECHNOLOGY AND ITS APPLICATION**

Principles and Processes; Recombinant DNA technology; Application in Health and Agriculture; genetically modified (GM) organisms; biosafety issues.

**UNIT -V**

**V ECOLOGY & ENVIRONMENT**

Organism and Population : Organisms and its environment, population and ecological adaptations.

Centres of diversity and conservation for biodiversity, Biosphere reserves, National parks and sanctuaries.

