

DETAILED PORTION CLASS XII

- **Under Unit Unit-VI Reproduction**

- **Chapter-1: Reproduction in Organism**

- Reproduction, a characteristic feature of all organisms for continuation of species; modes of reproduction - asexual and sexual reproduction; asexual reproduction - binary fission, sporulation, budding, gemmule formation, fragmentation; vegetative propagation in plants.

- **Under Unit-VII Genetics and Evolution**

- **Chapter-7: Evolution**

- Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy – Weinberg's principle; adaptive radiation; human evolution.

- **Under Unit-VIII Biology and Human Welfare**

- **Chapter 9: Strategies for Enhancement in Food Production**

- Animal husbandry, Plant breeding, tissue culture, single cell protein.

- **Under Unit-X Ecology and Environment**

- **Chapter-14: Ecosystem**

- Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).

- **Chapter 16: Environmental Issues**

- Air pollution and its control; water pollution and its control; agrochemicals and their effects; solid waste management; radioactive waste management; greenhouse effect and climate change impact and mitigation; ozone layer depletion; deforestation; exemplifying case study as success story addressing environmental issue(s).

DELETED PORTIONS CLASS XII: PRACTICAL

A: List of Experiments

1. Study the presence of suspended particulate matter in air at two widely different sites.
2. Study the plant population density by quadrat method.
3. Study the plant population frequency by quadrat method.

B. Study/Observer of the following (spotting)

1. Pollen germination on stigma through a permanent slide or scanning electron micrograph.
2. Mendelian inheritance using seeds of different colour/sizes of any plant.
3. Controlled pollination - emasculation, tagging and bagging.