

MJC-7 - Genetics - Theory -

Units - 1. Mendelian inheritance Mendel's experiments and principles of inheritance
back cross and test cross, gene interaction and modified dihybrid
ratio - Complementary, supplementary, duplicate and epistatic factor and
inhibitory gene.

2. Linkage and Crossing over, cytological basis of Crossing over,
Recombination frequency, two factor and three factor crosses, interference
and Coincidence, Sex determination and sex linked inheritance;
Cytoplasmic inheritance.

3. Mutation: - types and induction (physical and chemical mutagens)
Molecular basis of mutations and their role.

4. chromosomes: - physical and chemical characteristics, Lampbrush
chromosomes, B-chromosomes and polytene chromosomes; chromosomal
aberration, deletion, duplication, inversion, Translocation,
position effect, Euploidy and Aneuploidy, polyploidy (types and
role in evolution)