

Lesson Plan 2018-19

B.Sc (Zoology hons.) - 3rd sem

SUB : MOLECULAR BIOLOGY - I

BY : MANISHA SHARMA

JULY'2018

- Nucleic Acids convey Genetic Information

DNA as the carrier of genetic Information by key experiments.

Central Dogma

AUG'2018

Key experiments to establish DNA as double helix, Genetic code, Direction of protein synthesis, Genomics.

The structures of DNA and RNA / Genetic Material - DNA structure: Miescher to Watson and Crick, DNA structure Silent features of double helix

Sep'2018

Types of DNA, Types of genetic material, denaturation and renaturation, cot curves.

DNA topology - linking number, topoisomerases, Organization of DNA - Prokaryotes, Viruses, Eukaryotes,

RNA structure

Organelle DNA - mitochondria and chloroplast DNA.

M.A. Sharma

Lesson Plan Contd.
Molecular Biology - I

Oct '18

Genome structure, chromatin and the Nucleosome
Genome sequence and chromosome diversity,
chromosome Duplication and Segregation.

Chromatin structure - ~~Euchromatin~~ Euchromatin, Heterochromatin
constitutive and facultative heterochromatin.

Regulation of chromatin st. and Nucleosome Assem.
Organization of chromosomes.

Nov '18

The Replication of DNA (Prokaryotes & Eukaryotes)
Chemistry of DNA synthesis, General principles, various
Models of DNA replication, Enzymes Involved in
DNA replication.

The Mutability and Repair of DNA

Replication Errors, DNA damage & their Repair.

Maulika Sharma