

SECTION-B

- Q2 Briefly explain how chemicals cause mutagenesis.
- Q3 Write Brief account of :
- a. QTL Mapping
 - b. Karyotype
 - c. Insertional Mutagenesis.
- Q4 Giving a suitable example enunciate Mendel's law of Independent assortment of characters.
- Q5 How does catabolite repression control prokaryotic gene expression?
- Q6 Describe molecular mechanism of capping of eukaryotic mRNA.
- Q7 Explain how DNA methylation regulates gene expression in eukaryotes.
- Q8 Explain Post translational modification of proteins and their significance.

SECTION-C

- Q9
- a. Discuss the types and function of RNA Polymerases found in eukaryotes.
 - b. Explain application of Cot curves in determining the Complexity of eukaryotic genome.
- Q10
- a. What are the applications of Back cross and Test Cross in the study of Genetics?
 - b. Regulation of initiation of transcription by RNA Polymerase II in eukaryotes.
- Q11 Describe process of replication of DNA in bacteria.