

NS-3467 (CV-II)

B.Sc. (Biotechnology) Examination, June - 2021

Molecular Genetics and Cytogenetics (B-204)

B.Sc. (Bio-Tech.)

Time : 1½ Hours] [Maximum Marks : 50

Note : Attempt any **two** questions. **All**
questions carry equal marks.

1. What are inversions? Discuss different types of inversions with examples.
2. Write short notes on:
 - (a) Position effect
 - (b) Fine structure of r II locus in T₄ Phage

3. Discuss phenotypic effects of duplications and its role in plant breeding & evolution with examples.
4. Write short notes on:
 - (a) Tetrasomy
 - (b) Role of polyploidy in evolution
5. Differentiate between:
 - (a) Monosomy & Nullisomy
 - (b) Meiotic pairing & Chromosomal disjunction
 - (c) AFLP and RFLP
 - (d) Repetitive DNA & Satellite DNA
6. Describe in detail the tetrad analysis in Diploid Mapping.
7. What is Heterosis? Discuss types and causes of Heterosis and its application in crop improvement.

8. Write an essay on Animal genome mapping.
9. Write short notes on:
 - (a) Encode project
 - (b) SNP
10. Give a brief account on:
 - (a) Bridge breakage fusion cycle
 - (b) Robertsonian Translocation