

A
(20622) (Printed Pages 3)
Roll No. _____
B.Sc.(Biotech.) - II Yr

NS-3467

**B.Sc. (Biotechnology) Examination,
June-2022**

**MOLECULAR GENETICS AND
CYTOGENETICS**

(B-204)

(New)

B.Sc. (Bio-Tech.)

Time : Three Hours] [Maximum Marks : 50

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

1. What are Translocations? Discuss cytological and breeding behaviour of translocation heterozygote. 10

P.T.O.

2. Write short notes on : 5×2
(a) Classical gene concept
(b) Position Pseudoallelism
3. Write an essay on deficiencies and its use in chromosome mapping. 10
4. Write short notes on : 5×2
(a) Use of haploids in plant breeding
(b) Trisomy
5. Differentiate between : 2.5×4
(a) Paracentric and Pericentric inversions
(b) Autopolyploidy and Allopolyploidy
(c) RFLP & RAPD
(d) Chromosome walking and chromosome jumping.
6. Describe two point and three point test cross in haploid mapping in detail. 10

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7. Describe different methods of plant breeding used for crop improvement.

10

8. What are molecular markers? Discuss in detail the second and third generation molecular markers.

10

9. Short notes on : 5×2

(a) Human Genome project

(b) SSR

10. Give a short account on : 5×2

(a) Pseudodominance

(b) Spore Quartet Analysis