

**DD-315**

**M. Sc. (First Semester)  
EXAMINATION, Dec., 2019**

**BOTANY**

**Paper Second**

**(Genetics)**

*Time Three Hours*

*Maximum Marks : 80*

**Note : Attempt all the four questions. One question from each Unit is compulsory. All questions carry equal marks.**

**Unit—I**

1. Write an essay on special types of chromosomes

*Or*

Write short notes on any two of the following :

- (a) Nucleolus
- (b) Heterochromatin
- (c) Packaging of DNA

**Unit—II**

2. Explain transformation and transduction in Bacteria

*Or*

Write short notes on any two of the following :

[ 2 ]

- (a) Mapping of Bacteriophage
- (b) Chromosomes Pairing
- (c) Recombination in phage

**Unit—III**

3. Write an essay on Genetic recombination.

*Or*

Write short notes on any two of the following :

- (a) Role of Enzymes in Recombination
- (b) Linkage group
- (c) Genetic marker

**Unit—IV**

4. Explain Alien gene transfer through chromosome manipulation.

*Or*

Write short notes on the following :

- (a) Pure line selection
- (b) Hybridization
- (c) Resistant and Susceptible

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