

MJ-512

M.Sc. Botany

1st Semester Examination, July-Dec., 2021

Paper - II

Genetics

Time : Three Hours]

[Maximum Marks : 80

[Minimum Pass Marks : 16

Note : Answer from all the Units and Question No. 1 is compulsory. All questions carry equal marks.

1. Write short notes on the following :

(a) Packaging of DNA

(b) Phage phenotype

(c) Mechanism of crossing over

(d) Methods for detecting alien chromatin

(2)

Unit-I

2. What is the significance of Euchromatin and Heterochromatin chromosomes.

OR

Write short notes on the following :

- (a) Telomere
- (b) Karyotype

Unit-II

3. Describe the mapping of bacteriophage genome.

OR

Write short notes on the following :

- (a) Phage Phenotype
- (b) Bacteriophage genome

Unit-III

4. Describe the genetic recombination and gene mapping regarding prokaryotes and eukaryotes.

OR

Write short notes on the following :

- (a) Linkage group
- (b) Genetic marker

(3)

Unit-IV

5. Describe the Alien gene transfer through chromosome.

OR

Write short notes on the following :

- (a) Chromosome segment
- (b) Transfer of individual chromosome