

B.Sc. (CBCS Pattern) Semester-V
012A / DSE-I - Botany Paper-I - Genetics and Plant Breeding

P. Pages : 2

Time : Three Hours



GUG/W/24/13099(S)

Max. Marks : 50

1. Write on:

- | | |
|---|---|
| a) Describe co-dominance with suitable example. | 5 |
| b) Describe law of Independent assortment. | 5 |

OR

Write short notes on:

- | | |
|------------------------------------|----|
| c) Lethal gene. | 2½ |
| d) Polymeric gene. | 2½ |
| e) Characters of multiple alleles. | 2½ |
| f) Pleiotropism. | 2½ |

2. Write on:

- | | |
|--|---|
| a) Describe Leaf variegation in <u>Mirabillis Jalapa</u> . | 5 |
| b) Sex determination in <u>Coccinia Indica</u> . | 5 |

OR

Write short notes on:

- | | |
|---|----|
| c) Mutation in Mitochondria. | 2½ |
| d) Genetic map with 2 point test cross. | 2½ |
| e) Barr Body. | 2½ |
| f) Turnor syndrome. | 2½ |

3. Write on:

- | | |
|--|---|
| a) Describe objective & scope of plant breeding. | 5 |
| b) Mode of Reproduction in crop plants. | 5 |

OR

Write short notes on:

- c) History of plant breeding in India. 2½
- d) Semi dwarf wheat varieties. 2½
- e) Domestication of plants. 2½
- f) Center of origin (Indian center). 2½

4. Write on:

- a) Describe selection & breeding methods for cross pollinated crops. 5
- b) Describe procedure of hybridization. 5

OR

Write short notes on:

- c) Acclimatization. 2½
- d) Plant genetic resources. 2½
- e) Clonal selection. 2½
- f) Merits and demerits of plant introduction. 2½

5. Write on following in two or three line **any ten.** **10**

- a) Phenotype.
- b) Heterozygous.
- c) Alleles.
- d) Heterogametic male.
- e) Kappa particles.
- f) Klinefelters syndrome.
- g) Adaptability.
- h) Genetic erosion.
- i) Nobilization.
- j) Recurrent selection.
- k) Germplasm.
- l) Inter generic hybrid.
