

B.Sc. T.Y. (CBCS Pattern) Semester-V
012B - DSE-I Botany Paper-II - Genetics and Plant Breeding-II

P. Pages : 2

Time : Three Hours



GUG/S/25/13100

Max. Marks : 50

1. Write on:
- a) Write in detail on Prokaryotes gene structure. 5
 - b) Write in detail on types of Gene. 5

OR

Write short notes on.

- c) m-RNA 2½
- d) Wobble hypothesis. 2½
- e) Characteristics of gene pool. 2½
- f) Y-chromosome linked traits. 2½

2. Write on:
- a) Explain the structure and function of Typical chromosome. 5
 - b) Describe the Polytene chromosome. 5

OR

Write short notes on.

- c) Centromere Positions 2½
- d) Lampbrush chromosome. 2½
- e) B-Chromosome. 2½
- f) G & C-Bands 2½

3. Write on:
- a) Inbreeding depression. 5
 - b) Ex-Situ conservation. 5

OR

Write short notes on.

- c) Monogenic inheritance. 2½
- d) Quantitative inheritance. 2½
- e) Application of Heterosis. 2½
- f) DNA bank. 2½

4. Write on:
- a) Explain the polyploidy breeding. 5
 - b) Write on Distance hybridization. 5

OR

Write short notes on.

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| c) Applications of mutational breeding. | 2½ |
| d) Transgenic techniques (any two) | 2½ |
| e) Bt-Cotton | 2½ |
| f) Herbicide resistance. | 2½ |

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

- a) Exam
- b) Lagging strands.
- c) Genetic equilibrium.
- d) Chromosome number.
- e) Aneuploid
- f) Down's syndrome.
- g) Plant Breeding.
- h) Inheritance
- i) Hybridization
- j) Mutagenesis
- k) Pest resistance.
- l) Golden rice.
