

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

P. Pages : 2

Time : Three Hours



**GUG/W/23/13099**

Max. Marks : 50

- Notes :
1. All questions are compulsory.
  2. All questions carry equal marks.
  3. Draw well labelled diagrams wherever necessary.

**1.** Write on:

- |                               |          |
|-------------------------------|----------|
| a) Mendel's law of Dominance. | <b>5</b> |
| b) Polymeric gene             | <b>5</b> |

**OR**

Write short notes on:

- |                    |           |
|--------------------|-----------|
| c) Lethal gene     | <b>2½</b> |
| d) Inhibitory gene | <b>2½</b> |
| e) Pleiotropism    | <b>2½</b> |
| f) Co-dominance    | <b>2½</b> |

**2.** Write on:

- |  |          |
|--|----------|
| a) Leaf variegation in <i>Mirabilis jalapa</i> . | <b>5</b> |
| b) Kappa particles in <i>Paramecium</i> .        | <b>5</b> |

**OR**

Write short notes on:

- |                           |           |
|---------------------------|-----------|
| c) Turner's syndrome      | <b>2½</b> |
| d) Klinefelter's syndrome | <b>2½</b> |
| e) Lyon's hypothesis.     | <b>2½</b> |
| f) Barr body              | <b>2½</b> |

**3.** Write on:

- |  |          |
|--|----------|
| a) Objectives of plant breeding          | <b>5</b> |
| b) Modes of reproduction in crop plants. | <b>5</b> |

**OR**

Write short notes on:

- c) Domestication of crop plants. 2½
- d) Important achievements of plant breeding. 2½
- e) Scope of plant breeding. 2½
- f) Undesirable effects of plant breeding. 2½

4. Write on:

- a) Plant genetic resources. 5
- b) History, objectives and types of hybridization. 5

**OR**

Write short notes on:

- c) Mass selection 2½
- d) Distant hybridization 2½
- e) Acclimatisation 2½
- f) Plant introduction 2½

5. Write on the following in two or three line only **any ten** (Diagram not necessary) 10

- a) Gene
- b) Phenotype
- c) Monohybrid cross
- d) Syndrome
- e) Two point test cross
- f) Autosome
- g) Biotic resistance
- h) Plant Breeding
- i) Pollination
- j) Combination breeding
- k) Transgressive breeding
- l) Distant breeding

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