

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

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- 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. 5
- b) Polymeric gene 5

**OR**

Write short notes on:

- c) Lethal gene 2½
- d) Inhibitory gene 2½
- e) Pleiotropism 2½
- f) Co-dominance 2½

2. Write on:
- a) Leaf variegation in *Mirabilis jalapa*. 5
- b) Kappa particles in *Paramecium*. 5

**OR**

Write short notes on:

- c) Turners syndrome 2½
- d) Klinefelter's syndrome 2½
- e) Lyon's hypothesis. 2½
- f) Barr body 2½

3. Write on:
- a) Objectives of plant breeding 5
- b) Modes of reproduction in crop plants. 5

**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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