

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

P. Pages : 2

Time : Three Hours



GUG/W/24/13099

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) What is Multiple allelism, gives its characters with suitable example. 5
- b) Lethal gene (2:1). 5

OR

Write short notes on:

- a) Co-dominance (1:2:1). 2½
- b) Inhibitory gene interaction (15:1) 2½
- c) Polymeric gene (9:6:1) 2½
- d) Pleiotropism. 2½

2. Write on:

- a) Kappa particles in Paramecium. 5
- b) Explain sex determination in Human. 5

OR

Write short notes on:

- c) Leaf variegation in Mirabilis Jalapa. 2½
- d) Chromosome theory of inheritance. 2½
- e) 2-point test cross. 2½
- f) Turner syndrome. 2½

3. Write on:

- a) Explain different modes of vegetative reproduction. 5
- b) Write theory about domestication of crop plant. 5

OR

Write short notes on:

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|---|----|
| c) Objectives of plant breeding. | 2½ |
| d) Grafting technique. | 2½ |
| e) Important achievement of plant breeding. | 2½ |
| f) Vavilov's centers of origin. | 2½ |

4. Write on:

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|---|---|
| a) Clonal Selection-Explain. | 5 |
| b) Explain various methods of Emasculation. | 5 |

OR

Write short notes on:

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|---|----|
| c) Merits and demerits of plant introduction. | 2½ |
| d) Mass selection. | 2½ |
| e) Bagging | 2½ |
| f) Consequences of plant Hybridization. | 2½ |

5. Write **any ten** questions in two or three lines. **10**

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|--------------------------------|----------------------------|
| a) Mendel. | b) Allelomorphs. |
| c) F ₁ -generation. | d) Shell coiling in snail. |
| e) Genetic map. | f) Sex linked inheritance. |
| g) Reproduction. | h) Cutting. |
| i) Plant Breeding. | j) Quarantine. |
| k) Tagging. | l) Varieties. |
