B.Sc. (CBCS Pattern) Semester - V

012A : DSE : Botany Paper-I (Genetics and Plant Breeding-I)

P. Pages : 2 **GUG/S/23/13099**

Time : Three Hours * 0 2 4 2 * Max. Marks : 50

Notes : 1. All questions are compulsory.
2. Illustrate your answer with suitable examples draw well labelled diagrams wherever necessary.

1. Write on:

a) Dominant epistasis (12:3:1) with suitable examples. **5**

b) Multiple allelism with suitable examples. **5**

OR

Write short notes on:

c) Lethal gene (2:1) **2½**

d) co-dominance (1:2:1) **2½**

e) Polymeric gene (9:6:1) **2½**

f) Pleotropism. **2½**

2. Write on:

a) Leaf variegation in Mirabilis jalapa. **5**

b) Sex determination in plants. **5**

OR

Write short notes on:

c) Kappa particles. **2½**

d) 2-point test cross. **2½**

e) Klinefelter syndrome. **2½**

f) Turner's syndrome. **2½**

3. Write on:

a) What is plant breeding? Describe it's objectives. **5**

b) Centers of origin of crop plants. **5**

OR

Write short notes on:

c) Asexual reproduction in crop plants. **2½**

d) Important achievements of plant breeding. **2½**

e) Undesirable consequences of plant breeding. **2½**

f) Domestication of crop plants. **2½**

4. Write on:

a) Describe the procedure of plant introduction. **5**

b) Procedure of hybridization. **5**

OR

Write short notes on:

c) Clonal selection. **2½**

d) Recurrent selection. **2½**

e) Advantages of Hybridization. **2½**

f) Merits and demerits of plant introduction. **2½**

5. Write in two or three lines only **any ten** of the following (Diagram is not necessary). **10**

a) Phenotype

b) F_1 Generation

c) Factor

d) Genetic map

e) Sex chromosome

f) Barr bodies

g) Yield quality

h) Parthenogenesis

i) Mega gametogenesis

j) Pedigree Method

k) Bagging

l) Black cross method

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