

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

P. Pages : 2

Time : Three Hours



GUG/S/23/13100

Max. Marks : 50

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

- 1.** Write on :
- a) Modern concept of gene. 5
- b) RNA types and function. 5

OR

Write short notes on :

- c) Wobble Hypothesis. 2½
- d) Inheritance pattern of Autosomal Dominance. 2½
- e) Symbols and signs for Pedigree analysis. 2½
- f) Hardy-Weinberg law. 2½
- 2.** Write on :
- a) Morphology and structure of chromosome. 5
- b) Polytene chromosome. 5

OR

Write short notes on :

- c) B-chromosome. 2½
- d) Q-banding technique 2½
- e) Lampbrush chromosome. 2½
- f) Karyotype 2½
- 3.** Write on :
- a) Genetic basis of inbreeding depression. 5
- b) Polygenic inheritance. 5

OR

Write short notes on :

- c) Concept of quantitative inheritance. 2½
- d) Insitu seed banks 2½
- e) DNA banks 2½
- f) Heterosis 2½

4. Write on :

- a) Production of auto polyploids. 5
- b) Distant hybridization 5

OR

Write short notes on :

- c) Chemical Mutagen. 2½
- d) Achievements of distant hybridization. 2½
- e) Flavr savr tomatoes. 2½
- f) Bt-Cotton 2½

5. Write answers in two or three lines only. Diagrams are not necessary **any ten.** **1x10**
=10

- a) Gene
- b) Genetic code
- c) Population genetics
- d) R-Banding
- e) Chromosomal puff
- f) Chromosome mapping
- g) Monogenic inheritance
- h) Shoot tip banks
- i) Cell and organ banks
- j) Gamma Gardens
- k) Golden rice
- l) Transgenic crops.
