

B.Sc. (CBCS Pattern) Sem-V  
**012B - Botany Paper-II : Genetics and Plant Breeding-II**

P. Pages : 1

Time : Three Hours



GUG/W/22/13100

Max. Marks : 50

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1. Write on:
- a) Write in detail on characteristics of genetic code. 5
  - b) Explain Hardy – Weinberg Law. 5
- OR**
- Write short notes on:
- c) Autosomal dominance 2½
  - d) Sno RNA 2½
  - e) Symbols and sign used in Pedigree analysis. 2½
  - f) Gene frequency 2½
2. a) Linkage Mapping 5
- b) Polytene chromosome. 5
- OR**
- Write short notes on:
- c) B-chromosome 2½
  - d) Lampbrush chromosome 2½
  - e) Types of chromosome on the basis of centromere 2½
  - f) G-banding 2½
3. a) Write in detail on inbreeding. 5
- b) Polygenic inheritance. 5
- OR**
- Write short notes on:
- c) Monogenic inheritance 2½
  - d) Application of heterosis 2½
  - e) Seed banks 2½
  - f) Importance of germplasm conservation. 2½
4. Write on:
- a) Polyploidy breeding 5
  - b) Write in detail on distant hybridization. 5
- OR**
- Write short notes on:
- c) Chemical mutagens in plant breeding. 2½
  - d) Application of mutational breeding. 2½
  - e) Flavr savr tomato 2½
  - f) Bt. Cotton. 2½
5. Write **any ten** questions in two or three lines. 10
- a) Cistron
  - b) Semiconservative replication
  - c) Genetic drift
  - d) Satellite chromosome
  - e) R-banding
  - f) Idiogram
  - g) DNA banks
  - h) Organ banks
  - i) Heterosis definition
  - j) Gamma garden
  - k) Lethal genes
  - l) Golden rice

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