

**UG 5th Semester Examination 2021**

**BOTANY(Honours)**

**Paper: DSE-1**

**[CBCS]**

**(PLANT BREEDING)**

*(Figures in the margin indicate full marks)*

**Full Marks-25**

**Time - 2 Hours**

**1. Answer any five of the following:**

**1×5=5**

- Define aneuploids.
- Mention the probable centre of origin of the rice plant (*Oryza sativa* L.).
- What is R-line or Restorer line?
- Write the full form of NBPGR.
- What are pure lines?
- What is Recurrent Apomixis?
- Mention the role of Seed Banks.

**2. Answer any four of the following:**

**3×4=12**

- Define inbreeding depression with examples.
- State the advantages of clonal selection.
- Write down the importance of cytoplasmic male sterility (CMS) in plant breeding.
- Compare primary and secondary introduction of crop plants.
- Briefly describe the contrivances of Cross-pollination in plants.
- Enumerate the significances of Heterosis.
- Briefly describe polygenic inheritance with an example.

**3. Answer any one of the following:**

**8×1=8**

- What do you mean by mutation breeding? Describe the procedure of mutation breeding in self-pollinated crops. State two demerits of mutation breeding. (2+4+2)
- Compare between pedigree method and bulk method of hybridization. What is the back cross method? (6+2)