

**MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE**  
**SEMESTER END THEORY EXAMINATION**

**B.Sc.(Hons.) Agriculture**

Semester	: VI (New)	Term	: Second	Academic Year	: 2023-24
Course No.	: GPB 366	Title	: Crop Improvement - II ( <i>Rabi</i> crops)		
Credits	: 2 (1+1)				
Day & Date	: Tuesday, 30.04.2024	Time	: 14:00 to 16:00 hrs.	Total Marks	: 40

- Note :**
1. Solve ANY EIGHT questions from SECTION 'A'.
  2. All questions from SECTION 'B' are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagram wherever necessary.

**SECTION 'A'**

- Q.1 Write the major breeding objectives in Guava and Field pea.
- Q.2 Give the breeding objectives in Chickpea and Safflower.
- Q.3 Define Stability. Enlist the different models of stability and explain Eberhart and Russell model.
- Q.4 Write about Mango crop on the following points:
- a) Origin
  - b) Breeding objectives
  - c) Wild relatives
  - d) Constraints in hybridization
- Q.5 Define Ideotype. Describe the features of Wheat ideotype.
- Q.6 Describe the hybrid seed production technology of *rabi* Sorghum by using CGMS on following points:
- a) Sowing time and Seed rate
  - b) Planting ratio
  - c) Isolation distance
  - d) Field inspection
- Q.7 Give the botanical names and centre of origins of following crops:
- a) Maize
  - b) Barley
  - c) Pearl millet
  - d) Potato
- Q.8 Define Gene pool. Describe the classification of gene pool.
- Q.9 Write information of Sugarcane on following points:
- a) Breeding objectives
  - b) Floral biology
- Q.10 Write short notes on (Any Two):
- a) Evolution of hexaploidy in Wheat
  - b) Genetically Modified (GM) Mustard hybrid in India
  - c) Floral biology of Sunflower

(P.T.O.)

## SECTION 'B'

Q.11 Do as directed:

- 1) Define: Multiline variety
- 2) Spell-out: NBPGR
- 3) Give the name and location of National Research Institute of Maize.
- 4) Give the term for arrangement of stamens in Field pea.

Q.12 Fill in the blanks:

- 1) \_\_\_\_\_ is the origin of Guava.
- 2) Chromosome number of Oat is \_\_\_\_\_.
- 3) The Botanical name of Berseem is \_\_\_\_\_.
- 4) In Maize, Modified Ear to Row method was proposed by \_\_\_\_\_.

