

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Horticulture

[Fifth Deans' Committee Recommended Syllabus]

Semester : VI	Term : Second	Academic Year : 2024-25
Course No. : H/FL 364	Title : Breeding and Seed Production of Ornamental Plants	
Credits : 3(2+1)		
Day & Date : Tuesday, 15.04.2025	Time : 14:00 to 17:00 hrs.	Total Marks : 80

- 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 in short the history of breeding in ornamental crops.
- Q.2 Write in brief the procedure of hybridization in ornamental crops.
- Q.3 Enlist different methods of breeding in ornamental crops. Write the objectives of ornamental plant breeding.
- Q.4 Explain in brief the importance and scope of ornamental plant breeding.
- Q.5 a) Write in brief the breeding approaches for disease resistance.
b) Discuss the crop improvement methods used in Gladiolus.
- Q.6 Write short notes on (Any Two):
a) Genetic causes of heterosis
b) Biotechnological techniques
c) Storage of seed
- Q.7 a) What is Plant introduction? Give its types and advantages.
b) Write the steps involved in plant introduction.
- Q.8 a) Give the basic steps in seed production of open-pollinated varieties of flower crops.
b) What are the different classes of seed?
- Q.9 a) What is Male sterility? Write about the role of male sterility in developing F₁ hybrids.
b) Give the achievements through mutation breeding in various flower crops.
- Q.10 a) Enlist the specific breeding objectives of Rose.
b) Describe in short the steps followed in development of hybrids in Rose.

(P.T.O.)

SECTION 'B'

Q.11 Define the following terms:

- 1) Nucleus seed
- 2) Immune reaction
- 3) Genetic Engineering
- 4) Polyploidy
- 5) Hybrid variety
- 6) Off-type plant
- 7) Progeny test
- 8) Back cross

Q.12 Fill in the blanks:

- 1) The first artificial hybrid, _____ was prepared by crossing Sweet William with Carnation in 1717.
- 2) _____ is the first ever raised Bougainvillea cultivar in India.
- 3) 'Arka Surabhi' is a variety of _____ flower crop.
- 4) The variety _____ is a spontaneous mutant of Coreopsis.
- 5) _____ is the variety of Chrysanthemum, developed by Dr. PDKV, Akola.
- 6) Petunia is a member of _____ family.
- 7) The ICAR-NRC for Orchid is located at _____.
- 8) _____ and _____ are the mutants of Tuberose released by NBRI.

