

M. Sc. DEGREE END SEMESTER EXAMINATION : NOVEMBER 2023**SEMESTER 3 : BOTANY****COURSE : 21P3BOTT12 : PLANT REPRODUCTIVE BIOLOGY, PALYNOLOGY AND PLANT BREEDING***(For Regular - 2022 Admission and Supplementary - 2021 Admission)*

Duration : Three Hours

Max. Weights: 30

PART A**Answer any 8 questions****Weight: 1**

1. What is geitonogamy? (U)
2. What are the various factors determining the production and dispersal of pollen grains? ()
3. Give a brief outline of the methodology used in collecting pollen samples from sediments and fossils. ()
4. Write a note on the achievements of mutation breeding. (U)
5. Differentiate between drought resistance and drought avoidance. (An)
6. Define psychophily with the help of an example. (U)
7. What is filiform apparatus? Explain its roles. (U)
8. Write a short note on pollen symmetry. ()
9. Explain the influence of different breeding systems in plant breeding? (U)
10. What are the different types of animal mediated pollination syndromes? (U)

(1 x 8 = 8)**PART B****Answer any 6 questions****Weights: 2**

11. Describe intergeneric and inter specific hybridization. (U)
12. Explain the scope and significance of melisso-palynology in determining quality of honey. ()
13. Explain Millennium Seed Bank Project? (U)
14. Illustrate and explain the structure of sporoderm. ()
15. Write an account on the contributions of Jack Heslop-Harrison in plant developmental biology. (U)
16. Briefly explain four major pollination syndromes in flowering plants with examples. (U)
17. Explain the principles and working of Gamma gardens. (U)
18. Explain different mechanisms to overcome self-incompatibility in plants. (U)

(2 x 6 = 12)**PART C****Answer any 2 questions****Weights: 5**

19. Write an essay on the applications and significances of pollination biology. (U)
20. Write an essay on identification and separation of pollen grains from sediments, forensic samples, honey, rocks, archaeological sites and shipwrecks. (U)
21. Write a detailed account of embryogenesis in flowering plants. (U)
22. Enumerate the different ways of plant disease resistance. (An)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
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Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;