

Reg. No

Name

M. Sc DEGREE END SEMESTER EXAMINATION - OCTOBER 2019**SEMESTER 3 : BOTANY****COURSE : 16P3BOTT12 : PLANT REPRODUCTIVE BIOLOGY, PALYNOLOGY & PLANT BREEDING***(For Regular - 2018 Admission and Supplementary - 2016/2017 Admissions)*

Time : Three Hours

Max. Marks: 75

Section A**Answer any 8 (2 marks each)**

1. What is a gynodioicous flower?
2. Define phalaenophily. Give one example
3. What is filiform apparatus? What are its roles?
4. What is heteromorphic self-incompatibility?
5. What do you mean by pollen aperture and its types? Explain its significance.
6. What are honey stomach and pollen basket?
7. Write a short note on pollen pellets and bee pasturage.
8. What is secondary seed dormancy?
9. What is the genetic consequence of self pollination?
10. What is emasculation? Name two methods of emasculation.
11. What are gamma gardens?
12. What is clonal selection?

(2 x 8 = 16)

Section B**Answer any 7 (5 marks each)**

13. Explain the ultra-structure of pollen wall with the help of suitable labelled diagrams with an emphasis on the significance of each wall layer?
14. Explain any bee and bird pollinator with their respective adaptations for pollination in angiosperms.
15. What are the floral adaptations of two major abiotic pollination syndromes
16. What are the various germination and non germination assays used for checking pollen viability?
17. Explain the scope and significance of melisso-palynology in determining quality of honey.
18. Explain Millennium Seed Bank Project?
19. Briefly explain the Indian contributions towards plant reproductive biology
20. What are the mechanisms promoting cross pollination in plants?
21. Describe intergeneric and inter specific hybridization
22. Explain the importance of mutagens in plant breeding

(5 x 7 = 35)

Section C**Answer any 2 (12 marks each)**

23. Write an essay on the fertilization and post fertilization events in angiosperms.

OR

24. Write a detailed account of embryogenesis in flowering plants.

25. Write an essay on history, scope and relevance of palynology.

OR

26. Write a detailed account of Modern agricultural techniques and practices?

(12 x 2 = 24)