Reg. No ..... Name **18P3646**

MSc DEGREE END SEMESTER EXAMINATION - OCTOBER 2018

SEMESTER 3 : BOTANY

COURSE : **16P3BOTT12 : PLANT REPRODUCTIVE BIOLOGY, PALYNOLOGY & PLANT BREEDING**

(For Regular - 2017 Admission & Supplementary - 2016 Admission)

Time : Three Hours Max. Marks: 75

Section A
Answer any 8 (2 marks each)

1. Differentiate monothecous and dithecous anthers. Give examples.
2. What is chiropterophily? Give one example.
3. Define endosperm haustoria.
4. What is geitonogamy?
5. Differentiate between colpate, sulcate and porate aperture types in pollen grains.
6. What is meant by pollen diagram?
7. Differentiate between unifloral honey and multifloral honey.
8. What is a seed?
9. Explain seed vigor and seed viability.
10. What is apomixis?
11. What is emasculation? Name two methods of emasculation.
12. Give a brief account of plant introduction.

(2 x 8 = 16)

Section B
Answer any 7 (5 marks each)

13. Explain the adaptations of flowers and their respective pollinators of Melittophily, Psychophily and Ornithophily.
14. Describe different types of stigma and their significances.
15. Explain different mechanisms to overcome self-incompatibility in plants.
16. What is meant by FDA/FCR test? How it is significant in pollen biology?
17. What are the tools and methods used for pollen sampling?
18. Explain different types of seed dormancy.
19. Discuss the importance of Prof. K R Shivanna's contributions to plant reproductive biology.
20. Explain inbreeding depression. How it can be overcome?
21. Describe the various methods of plant breeding to develop disease resistant varieties.
22. Briefly discuss the application of distant hybridization in crop improvement.

(5 x 7 = 35)

Section C

Answer the following (12 marks each)

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

OR

24. Write an essay on the structure, development, and functions of endosperm.

25. Write an essay on pollen apertures and its significance in palynology.

OR

26. Give an account on different types of mutagens with reference to their role in crop improvement.

(12 x 2 = 24)