Reg. No ..... Name **17P3646**

MSc DEGREE END SEMESTER EXAMINATION- OCTOBER-NOVEMBER 2017

SEMESTER 3 : BOTANY

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

(For Regular - 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. List out the characteristics of Myopholous flowers.
3. What is double fertilization?
4. Differentiate between gametophytic and sporophytic sexual incompatibility.
5. Differentiate between colpate, sulcate and porate aperture types in pollen grains.
6. What are honey stomach and pollen basket?
7. Differentiate between unifloral honey and multifloral honey.
8. Explain different parts of a typical angiosperm ovule.
9. What is seed dormancy?
10. What is apomixis?
11. What is emasculation? Name two methods of emasculation.
12. Explain nobilization of Indian cane.

8 x 2 (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. Explain the scope and significance of melisso-palynology in determining quality of honey.
18. Explain different types of seed dormancy.
19. Discuss the importance of Prof. K R Shivanna's contributions to plant reproductive biology.

20. Briefly discuss the application of distant hybridization in crop improvement.
21. Describe the various methods of plant breeding to develop disease resistant varieties.

7 x 5 (35)

Section C
Answer any 2 (12 marks each)

22. Write an essay on the stages of megasporogenesis and different types of embryo sac development with examples.

OR

23. Write an essay on the fertilization and post fertilization events in angiosperms.
24. Write an essay on pollen apertures and its significance in palynology.

OR

25. Describe various steps involved in mutation breeding.

2 x 12 (24)