Reg. No ..... Name **20P3021**

MSc DEGREE END SEMESTER EXAMINATION - OCT/NOV 2020: JAN 2021

SEMESTER 3 : BOTANY

COURSE : **16P3BOTT10 : GYMNOSPERMS,EVOLUTION & PALEOBOTANY**

(For Regular - 2019 Admission and Supplementary - 2016/2017/2018 Admissions)

Time : Three Hours Max. Marks: 75

PART A

Answer any 8 (2 marks each)

1. Define pollination drop mechanism with examples.
2. Distinguish between anatropous and orthotropus ovule.
3. Define apophysis.
4. Define diploxylic condition of vasculature.
5. What are the different layers of an integument?
6. What are vestigial organs? Give two examples.
7. What are microspheres?
8. What is history character of evolution?
9. What is the difference between competitive displacement and incumbent displacement?
10. What is allopatric speciation?
11. What is a cupule?
12. Define ICBN.

(2 x 8 = 16)

PART B

Answer any 7 (5 marks each)

13. Give a comparative account of the morphology of *Cycas* and *Bennettites*.
14. Explain the general characters of families coming under Order Coniferopsida.
15. Briefly explain the distribution and economic importance of living conifers.
16. Compare parthenogenesis and the cost of sex.
17. Explain allopatric speciation and sympatric speciation.
18. Explain any four isolating mechanisms in evolution.
19. Explain the features of a petrified fossil with examples.
20. What are the general characters of Cycadoideaceae?
21. Explain the importance of fossils today and in future.
22. Distinguish between pteridophytes and gymnosperms.

(5 x 7 = 35)

PART C

Answer any 2 (12 marks each)

23. Discuss about the evolution of flower in gymnosperms.

OR

24. Write on the economic importance of gymnosperms.
25. What are the multiple outcomes of evolutionary change?

OR

26. Discuss the importance of isolation as a factor in the evolution of new species.

(12 x 2 = 24)