Reg. No ..... Name **20P1034**

M. Sc DEGREE END SEMESTER EXAMINATION - OCT 2020 : FEBRUARY 2021

SEMESTER 1 : BOTANY

COURSE : **16P1BOTT03 : ECOLOGY AND ENVIRONMENTAL SCIENCE, PHYTOGEOGRAPHY AND RESEARCH METHODOLOGY**

(For Regular - 2020 Admission and Supplementary - 2016/2017/2018/2019 Admissions)

Time : Three Hours Max. Marks: 75

PART A

Answer any 8 (2 marks each)

1. Define ecosystem.
2. Explain logistic model of population growth.
3. What is Jaccard's dissimilarity index?
4. What is cyclic succession?
5. Distinguish allopatric and sympatric distribution.
6. What is Remote Sensing? Explain its application in monitoring vegetation dynamics.
7. Give the binomial of any two endemic plants of Western Ghats.
8. What is rhizosphere degradation?
9. Expand the following : UNEP,IPCC,UNFCC,NEPA.
10. Define abstracting journals.
11. Differentiate a dissertation and Reserach report.
12. What is a patent? What are its significances?

(2 x 8 = 16)

PART B

Answer any 7 (5 marks each)

13. Briefly explain the structure of a typical population.
14. Explain Grim's triangle on plant life history traits.
15. Explain different measurements with which we can measure different attributes of a community.
16. Explain biodiversity in different ecosystems with an emphasis on the abiotic factors controlling the diversity in these ecosystems.
17. What are the different climatic seasons in India?
18. Briefly explain different threat categories put forth by IUCN for the conservation of plants.
19. Discuss about the conservation of natural resources of the Western Ghats.
20. Explain different stages in the formation of biofilms.
21. What are the applications of bioscrubber?
22. Explain different types of hypothesis and describe how would you incorporate these hypothesis in your research.

(5 x 7 = 35)

PART C

Answer any 2 (12 marks each)

23. Write an essay on inter- and intra- species interactions in a population. Discuss how these interactions affects the stability of population.

OR

24. Write an essay on the role of IUCN in the conservation of ecosystems and biodiversity.

25. Explain major factors responsible for global climate change.

OR

26. Explain different steps involved in research process and mention the significances of each step.

(12 x 2 = 24)