

P.G. Semester-IV Examination, 2023**BOTANY**

Course ID : 41351 Course Code : BOT-401C(TH)

Course Title : Ecology and Evolution

Time : 2 Hours

Full Marks : 30

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A****(Ecology)**

1. Answer any **two** of the followings: 1×2=2
 - a) What is biome?
 - b) Define aerosol.
 - c) What is biogeochemical cycle?
 - d) What is Red Data book?
2. Answer any **one** of the following: 5×1=5
 - a) Define ecological efficiency. Write the different steps to understand ecological efficiency of an ecosystem. 2+3=5

- b) Define ecological niche. Explain its different types with suitable examples. 2+3=5

3. Answer any **one** of the following: 8×1=8
 - a) Distinguish between primary succession and secondary succession. Describe the various successional stages of hydrosere. 2+6=8
 - b) What is population? Describe the characteristics of population. 2+6=8

GROUP-B**(Evolution)**

4. Answer any **two** of the following: 1×2=2
 - a) What is geological time cycle?
 - b) What is Hardy-Weinberg principle?
 - c) What is genetic drift?
 - d) What is micro evolution?
5. Answer any **one** of the following: 5×1=5
 - a) Describe the different steps of chemical origin of life. 5
 - b) What is biogeography? Explain that the natural selection is the driving force of evolution. 2+3=5

6. Answer any **one** of the following: $8 \times 1 = 8$

a) Write a brief note on pre-Darwinian theories regarding evolution. 8

b) State how species may originate following proposals of Darwin. What are the main drawbacks of Darwinism? $6 + 2 = 8$
