

U.G. 4th Semester Examination - 2020

Environmental Science

[HONOURS]

Course Code : ENVS-H-CC-L-08

(Biosystematics and Biogeography)

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any **five** from the following: $2 \times 5 = 10$
- Define *Alpha* taxonomy.
 - What do you understand by binomial nomenclature in taxonomy?
 - Define parallel evolution.
 - What is ecotype?
 - What do you understand by taxonomical data base?
 - What is genetic drift?
 - Define natural selection of species.

2. Answer any **two** from the following: $5 \times 2 = 10$
- Briefly explain the practical applications of biosystematics.
 - Give a brief account of taxonomic hierarchy.
 - Explain the drawbacks of kingdom system of classification introduced by Linnaeus.
 - Write a brief account of DNA barcoding.
3. Answer any **two** from the following: $10 \times 2 = 20$
- Define taxonomical aids. What is herbarium? Explain the herbarium techniques. $2+2+6=10$
 - Explain briefly the scope and significance of biosystematics in experimental taxonomy. $5+5=10$
 - Briefly explain the role of continental drift in present biogeographical pattern development. Define cosmopolitan species with examples? $6+4=10$
 - What is speciation? Explain briefly the process of speciation. What are the barriers to dispersal of species? $2+6+2=10$