



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 1st Semester Examination, 2023

CC2-ZOOLOGY

ECOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** questions from the following: 1×5 = 5
 - (a) Who first coined the term “Ecosystem”?
 - (b) Point out two limitations of “Pyramid of numbers”.
 - (c) What do you mean by carrying capacity?
 - (d) Define species richness.
 - (e) Cite one example of lithosere succession.
 - (f) What do you mean by denitrification?
 - (g) What is beta-diversity?
 - (h) Cite one example of estuarine ecosystem.

2. Answer any **three** questions from the following: 5×3 = 15
 - (a) Describe the different types of density-dependent and independent factors.
 - (b) Differentiate between Law of Minimum and Law of Tolerance.
 - (c) With suitable examples describe the detritus food chain. Comment on links between grazing and detritus food chain. 3+2
 - (d) List the IUCN technical guidelines for the management of *ex-situ* conservation.
 - (e) What do you mean by biodiversity? Give an account of the factors regulating species diversity. 2+3

3. Answer any **two** questions from the following: 10×2 = 20
 - (a) Define biogeochemical cycle. Briefly describe how nitrogen cycle operates within an ecosystem. 2+8
 - (b) Distinguish between *in-situ* and *ex-situ* conservation. Briefly describe their aim, scope and limitations. 3+7
 - (c) Write the difference between primary and secondary succession. Briefly describe a succession occurring in aquatic ecosystem. 10
 - (d) Point out four major objectives of wildlife conservation. Comment on various approaches for the conservation and management of tiger in India. Add a note on Wildlife Protection Act (1972). 2+5+3

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