



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 1st Semester Examination, 2019



**ZOOACOR02T-ZOOLOGY (CC2)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

**GROUP-A**

1. Answer any **eight** questions from the following: 2×8 = 16
- (a) What are ecotype and ecads?
  - (b) What is Homeostasis?
  - (c) What do you mean by Umbrella species?
  - (d) What do you mean by Biological Nitrogen fixation?
  - (e) What are keystone species? Give examples.
  - (f) What are hotspots? How many of them are present in India? Name them.
  - (g) What is pioneer species? Give example.
  - (h) Mention two density dependent factors of population growth.
  - (i) What do you mean by eurythermal animal? Give example.
  - (j) What is fecundity and fertility?
  - (k) What is Autogenic and Allogenic succession?
  - (l) Write the difference between Food chain and Food web.

**GROUP-B**

2. Answer any **three** questions from the following: 3×3 = 9
- (a) What is closed community? How it differs from open community? 1+2
  - (b) (i) What is zero isocline? 1+2  
(ii) What is Lotka-Volterra Competition model?
  - (c) What are the criteria for establishment of Biosphere reserve? Describe the structural components for Biosphere reserve. 1½ + 1½
  - (d) What are age pyramids? Describe different types of it. 1+2
  - (e) What are the eight red list categories declared by IUCN? Name them with one example each. 3

(f) Draw the survivorship curves for frogs and human populations.

$1\frac{1}{2} + 1\frac{1}{2}$

(g) State the law of minimum and law of tolerance.

$1\frac{1}{2} + 1\frac{1}{2}$

**GROUP-C**

3. Answer any *three* questions from the following:

5×3 = 15

(a) What are the different Pyramids that exist in the tropic level? What is an inverted Pyramid? Give example. What is the significance of these Pyramids in ecological tropic levels?

2+2+1

(b) Describe the Nitrogen Cycle in brief with proper diagram.

$2\frac{1}{2} + 2\frac{1}{2}$

(c) Differentiate between ecological niche and habitat. What are the four stages of ecological succession? Cite examples.

2+2+1

(d) What are multidimensional or Hypervolume niche? Explain with suitable examples. Explain the concept of resource partitioning and character displacement.

2+3

(e) Mention the measures taken by the Sundarban Tiger-Reserve Authorities in the Sundarban Reserve Forest.

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