

2019

B.Sc.

1st Semester Examination  
**ZOOLOGY (Honours)**

Paper - C 2-T

(Ecology)

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

1. Answer any five questions of the following :

5×2=10

- (a) What is Ecotore ?
- (b) State the difference between autogenic and allogenic succession.
- (c) What is species richness ?
- (d) What is the difference between food chain and food Web ?

[ Turn Over ]

(e) State the difference between in-situ and ex-situ conservation.

(f) Distinguish between habitat and niche.

(g) Name two human modified ecosystem.

(h) Define edge species. Give one example.

2. Answer any *four* questions.  $4 \times 5 = 20$

(a) What is ecological pyramid ? Who coined the said term ? State the difference between pyramid of number and pyramid of Biomass.  $1+1+3$

(b) Write down the Gause's principle. Describe one experimental and one natural evidence in support of Gause's principle.  $1+4$

(c) What is energy ? Describe the energy flow with suitable examples in an autotroph based ecosystem.  $1+4$

(d) Name the different types of food web with examples.  $5$

(e) Write a note on Wild life protection Act (1972).  $5$

(f) What do you mean by Geometric, exponential and logistic growth in population.  $2+2+1$

3. Answer any *one* question :

1×10

- (a) Deduce Lotka-Volterra equation for competition. What would be the outcome of competition if

$$\alpha > \frac{k_1}{k_2} \text{ and } \beta > \frac{k_1}{k_2} ? \quad 8+2$$

- (b) With reference to Shelfords law explain the limits of tolerance imposed by environmental factors on organisms. Elucidate the effect of temperature on organisms. 3+2+3+2
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