

- (b) Define Food chain. Explain the differences between Linear and Y-shaped food chain, with examples. (5)

6. Write short notes on **any three** of the following:
(3 × 5)

- (a) Light as a limiting factor
- (b) Ecological Pyramids
- (c) Types of species interactions
- (d) Survivorship curves
- (e) Ecotone and edge effect
- (f) Vertical stratification in forests

Your Roll No.....

Sr. No. of Question Paper : 1072 D

Unique Paper Code : 2232011103

Name of the Paper : DSC-3, Concepts of Ecology

Name of the Course : **B.Sc. (Hon) Zoology**

Semester : I UGCF

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all.
3. **Question no. 1** is compulsory.

1. (a) Define the following: (4)
(i) Guilds

(500)

P.T.O.

- (ii) Ecosystem
- (iii) Ecological efficiency
- (iv) Keystone species
- (b) Distinguish between the following: (6)
 - (i) Grazing and detritus food chain
 - (ii) Amensalism and Commensalism
 - (iii) Autogenic and Allogenic succession
- (c) Fill in the blanks: (2)
 - (a) _____ is a type of biological interaction where one species causes harm to another organism without any harm or benefits to itself.
 - (b) _____ life tables are the most accurate types of life tables.
- (d) Name the scientists associated with the following terms: (3)
 - (i) Competitive exclusion principle
 - (ii) Ecology

- (iii) Life Table
- 2. (a) Describe density dependent regulation of a population. (7)
- (b) Briefly describe Shelford's Law of Tolerance with the help of suitable examples. (4)
- (c) Elaborate the differences between autecology and synecology (4)
- 3. (a) Describe various possible outcomes of inter-specific competition with graphical representation and equations. (9)
- (b) Differentiate between r-selected and k-selected species. (6)
- 4. (a) Define ecological succession? Give the differences between pioneer and climax community. (6)
- (b) Explain the phenomenon of primary succession in a community with an example. (9)
- 5. (a) What are Biogeochemical cycles? Explain the role of micro-organisms in Nitrogen cycle. Along with a neat labelled diagram of Nitrogen cycle (10)