

1634

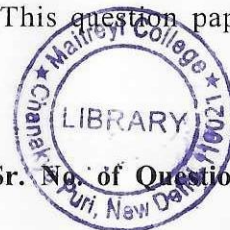
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6. Write short notes on **any three** of the following :
(3×5)

- (a) Nitrogen cycle
- (b) Raunkiaer's life forms
- (c) Ecological efficiency
- (d) Protected areas
- (e) Temperature as a limiting factor
- (f) Theories of climax in succession

(500)

[This question paper contains 4 printed pages.]



08.01.2024(M)

Your Roll No.....

Sr. No. of Question Paper : 1634

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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 : (3)

- (i) Autecology
- (ii) Modular population
- (iii) Detritus food chain

P.T.O.

- (b) Distinguish between the following : (6)
- (i) Pioneer and climax community
 - (ii) Mutualism and Amensalism
 - (iii) Physiological and realized mortality
- (c) Illustrate the following with the help of diagrams (no description required) : (4)
- (i) Types of survivorship curves
 - (ii) Patterns of dispersion
- (d) Name the scientists associated with the following terms : (2)
- (i) Exponential population growth
 - (ii) Ecosystem
 - (iii) Law of tolerance
 - (iv) Food chain
2. (a) Explain with suitable diagrams and equations the exponential and logistic growth forms of population. (8)

- (b) Describe various density dependent factors that regulate the population size near carrying capacity level. (7)
3. (a) What are the main causes of wildlife depletion in India? What are the different strategies for wildlife conservation? (9)
- (b) What is environmental impact assessment? Add a note on its significance. (6)
4. (a) What is competitive exclusion principle? Briefly describe the experiments conducted by Gause to explain this principle in the laboratory. (9)
- (b) Differentiate between numerical and functional response of the predator. (6)
5. (a) Explain the Universal and Y-shaped energy flow model with the help of suitable diagrams. (9)
- (b) Discuss the various types of ecological pyramids. (6)