

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 5767

K

Unique Paper Code : 2182014701

Name of the Paper : Methods in Ecological Research

Name of the Course : **B.Sc. (H) Environmental
Sciences – Core**

Semester : VII

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 any **four** questions.
3. **All** questions carry equal marks.

1. Write detailed notes on **any two** the following :

(7½×2=15)

- (a) Scientific method and its application in ecological research
- (b) Methods used in restoration ecology
- (c) Behavioural data analysis techniques

2. (a) Describe mark-recapture and abundance estimation techniques in animal population studies. (8)

P.T.O.

- (b) Discuss the role of molecular tools in evolutionary ecology research. (7)
3. Describe various techniques used to study competition, mutualism, and interactions in community ecology. Provide examples. Also, mention their advantages and limitations. (15)
4. (a) Write a detailed note on ecosystem function and service evaluation methods. (9)
- (b) What do you mean by ethical considerations in ecological research? (6)
5. (a) Define ecological restoration. Explain methods of ecosystem restoration and carbon cycling assessment. (10)
- (b) Discuss phylogenetic tools and adaptation studies in ecology. (5)
6. Elaborate upon **any two** of the following : (7½×2=15)
- (a) Biodiversity estimation techniques
- (b) Tracking the movement of animals
- (c) Climate change studies using remote sensing

(200)