

Roll No. :

Total No. of Questions : 16]

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SEM-3011

M.Sc. (IIIrd Semester) Examination, 2022

ENVIRONMENTAL SCIENCE

Paper - ESCE-303 (A)

(Population and Community Ecology)

Time : 3 Hours]

[Maximum Marks : 40

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries 1 mark.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer all *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries 3 marks.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries 5 marks.

Section-A

1. Attempt all *ten* questions. Answers should not exceed **50** words in each question.

- (i) What is Ecosystem ?
- (ii) Define Population Ecology.

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- (iii) What is Plant Stress Adaptation ?
- (iv) Define Life Support Systems.
- (v) What is Population Ecology ?
- (vi) What is Population Growth ?
- (vii) Define Species Conservation.
- (viii) What is Symbiosis ?
- (ix) Define Interspecific Competition.
- (x) What is Biotic and Abiotic factors ?

Section-B

Note :- Answer any *five* questions in about **200** words, by selecting at least *one* question from each Unit. Each question carries **3** marks.

Unit-I

- 2. Write a note on the Plant Stress Adaptation.
- 3. What is Life Support System ?
- 4. Impact of Climate Change on Biosphere.

Unit-II

- 5. Write a note on Population Fluctuation.
- 6. What is Carrying Capacity ?
- 7. Define 'J' and 'S' shaped curves of Population Growth.

Unit-III

- 8. What is Species Richness ?
- 9. What are the various factors that governs 'Stability of Ecosystem' ?
- 10. Write a note on 'Keystone Species'.

Section-C

Note :- Answer any *three* questions in this Section, by selecting *one* question from each Unit in about **500** words. Each question carries **5** marks.

Unit-I

11. Write an essay on Eco-physiological Adaptation in Plants for Stressed Environment.
12. Describe the Ecological Restoration.

Unit-II

13. What are the factors responsible for the extinction of a Species ?
14. What is Population Dispersal ? Describe with suitable example.

Unit-III

15. Write an essay on the 'Interdependence of Plants and Animals'.
16. Describe the role of Nutrients, Water and Energy in determining Community.