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Or

Define and explain antibiosis with the help of suitable examples.

(D) What is mutualism ? What are the possible reasons for the evolution of mutualism ? Explain mutualism between two animal species. **12**

Or

What is commensalism ? Explain different types of commensalism with the help of suitable examples.

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Roll No. .....

Code No. : A04/4305

Fourth Semester Online Examination, August 2021

M.Sc.

ZOOLOGY

Paper III

[Population Ecology]

Time : Three Hours] [Maximum Marks : 80

Note **:** *Part A and B of each question in each unit consist of Very Short Answer Type Questions, which are to be answered in one or two sentences. Part C (Short Answer Type) and D (Long Answer Type) of each question should be answered within the word limit 200-250 and 400-450.*

Unit – I

1. (A) Give difference between a cohort life table and a time specific life table. **2**

(B) Define fecundity. **2**

(C) Write a note on Natality. **4**

Or

Explain Mortality.

(D) What is population density ? Describe various methods used for estimation of population density. **12**

Or

What is population growth ? Describe various phases of a typical population growth curve.

Unit – II

2. (A) Give at least two significance of animal dispersal. **2**

(B) Define Biotic potential. **2**

(C) Write a note on migration in mammals. **4**

Or

Discuss different factors affecting migration in animals.

(D) Write an essay on population cycle. **12**

Or

Describe intrinsic mechanism for regulation of population size.

Unit – III

3. (A) Define habitate. **2**

(B) What is niche ? **2**

(C) Explain effect of humidity as limiting factor for animals. **4**

Or

Write a note on sex ratio

(D) Differentiate between the ecological niche and microhabitate. How would you explain adaptive convergence on the basis of ecological niche ? **12**

Or

State Gauss's principle of competitive exclusion. Justify it with the help of suitable example.

Unit – IV

4. (A) If the population of prey declines, suggest two possible consequences for predators. **2**

(B) Give possible deduction for the following statement, "In a particular area the population of a predator did not decline following a big reduction in the population of its main prey. **2**

(C) Write a note on internal parasitic adaptation. **4**