Q.4 D. Explain with examples about various types of negative interspecific interactions. **(12)**

OR

Elaborate the concept of mutualism by citing different examples. Is it a voluntary consortism? How is it different from commensalism?

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Roll No.....

Total No. of Units : 04
Total No. of Printed Pages : 04

Code No. : 04/305

Fourth Semester Examination, May 2019

M.Sc. ZOOLOGY

Paper - III

POPULATION ECOLOGY

Time : 3 Hrs. **Max. Marks : 80**

- 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) of each question should be answered in 200-250 words.
- Part D (Long answer type) of each question should be answered within the word limit 400-450.

Unit - I

Q.1 A. Define 'Mortality'. **(2)**

Q.1 B. What do we call the peak constant level of sigmoid population growth curve? What does it represent? **(2)**

Q.1 C. What do you understand by 'fecundity'? Explain with examples about potential and realized fecundity. **(4)**

OR

While plotting a two-dimensional survivorship curve on the basis of survivors and age, explain the significance of highly convex curve highly concave curve and diagonal straight-line curve

Q.1 D. Define population density. Explain with examples about the different methods of determination of population density. **(12)**

OR

What is 'life table'? How is it constructed? Mention the uses of life tables.

Unit - II

Q.2 A. Very briefly write down the contribution of 'Chapman' in the field of population ecology. **(2)**

Q.2 B. Clarify the concept of population cycle with an example. **(2)**

Q.2 C. What do you understand by 'Environmental resistance'? Elaborate to explain its effect on biotic potential. **(4)**

OR

Explain the consequences and examples of 'Migration, Emigration and Immigration' in short.

Q.2 D. What do we call a model representing geometrically the proportion of different age groups in the population of any organism? Write its different types and uses with suitable examples and diagrams. **(12)**

OR

What do you understand by 'population size'? What factors affect the population size? Elaborate the mechanisms of its regulation.

Unit - III

Q.3 A. Explain very shortly the meaning of 'K-selected populations'. **(2)**

Q.3 B. What do you understand by 'Breeding age'? **(2)**

Q.3 C. Define ecotone. Explain the 'edge effect'. **(4)**

OR

Define the term competition in population ecology. Explain its various categories.

Q.3 D. Elaborate the concept of limiting factors. Also write down the principles pertaining to it. **(12)**

OR

Define Niche. Describe three aspects of ecological niche with examples. Write briefly, about the advantages of 'Niche Segregation'.

Unit - IV

Q.4 A. Write a good example of protoco-operation. **(2)**

Q.4 B. Define neutralism. **(2)**

Q.4 C. Describe commensalism with suitable example. **(4)**

OR

What do you understand by Host specificity of parasites? What are possible reasons behind it?

P.T.O.