

Five Year Integrated M.Sc. Examination, 2019

Semester - VI

Course: LS-3-6-2

(Ecological Principles)

Time: Four Hours

Full Marks: 80

Questions are of value as indicated in the margin.

Answer **Question No.1** and **any six** from the rest.

1. Write short notes on **any ten** of the following: 2x10=20
 - a) Difference between Natality and Mortality.
 - b) Demography of human population.
 - c) Competitive exclusion principle.
 - d) Resource partitioning
 - e) Differences between r and k selection strategies.
 - f) Net primary production
 - g) Carrying capacity
 - h) Keystone species
 - i) Ozone depletion
 - j) Acid rain
 - k) Global warming
 - l) What is air pollution and list some major air pollutants?
 2.
 - a) What is niche width? 2
 - b) What is niche overlap? 2
 - c) Explain different possible types of niche overlap with suitable diagram. 6
 3.
 - a) What is vital index? 2
 - b) Define survivor ship curve? 2
 - c) Explain the different curves with suitable examples. 6
 4.
 - a) Define J and S – shaped curves. 2+2
 - b) Explain J and S – shaped curves with diagrams. 5
 - c) What is the significance of these curves? 1
 5.
 - a) What do you mean by metapopulation? 3
 - b) Discuss different kinds of metapopulation with illustration. 7
 6.
 - a) What do you understand by herbivory? 2
 - b) Describe various kinds of species interactions in detail with specific examples. 8
 7.
 - a) Define ecological succession. 2
 - b) Elucidate the types, mechanisms, and various changes involved in succession. 8
 8.
 - a) What do you mean by mineral cycling? 3
 - b) Explain the nitrogen cycle in detail giving suitable examples. 7
 9. Write a note on wildlife management concept. 10
-