

Five-Year Integrated M.Sc. Examination, 2021-2022

Semester - VII

Earth and Environmental Science

Paper: EES-4-7-5

Subject: Ecology

Time: 3 Hours

Full Marks: 40

Marks of the questions are given on the right side.

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

1. Write the short notes on **any four** of the following. 4×2 = 8
 - a. Components of biogeochemical cycle
 - b. Difference between primary and secondary ecological succession
 - c. Keystone species
 - d. Pyramid of biomass in aquatic ecosystem
 - e. Why pyramid of energy always upright
 - f. Leaf area index
2. Define the biogeochemical cycle? Describe the impact of human activity on the phosphorous cycle. 4+4 = 8
3. What is ecological succession? Describe the key steps of ecological succession. 2+6 = 8
4. What is the population growth curve? Describe the S- shape and J- shape population growth curve with a suitable example. 2+6 = 8
5. What is Lotka–Volterra model ? Explain with example. 4+4 = 8
6. Define an ecological niche? Describe in detail with example. 2+6 = 8
7. What is population interaction? Explain the possible type of population interaction with example. 2+6 = 8