

**2022**  
**M.Sc.**  
**Fourth Semester**  
CORE – 11  
**ZOOLOGY**  
*Course Code: MZOC 4.11*  
(Ecology & Environment Biology)

*Total Mark: 70*

*Pass Mark: 28*

*Time: 3 hours*

*Answer five questions, taking one from each unit.*

**UNIT-I**

1. Give a detailed account on the different ecological niches. 14
2. Explain laws and limiting factors on the environment. Write the factors and effect of temperature and light on the ecosystem. 7+7=14

**UNIT-II**

3. Write notes on the following: 7×2=14
  - (a) Species richness
  - (b) Species diversity
4. What is density dependent and density independent in population ecology? Write the life history strategies of K and r selection rule. 7+7=14

**UNIT-III**

5. Explain the mode of ecological succession in terrestrial ecosystem. What is Lindeman's trophic dynamics concept? 14
6. Explain the different theories on the concept of climax. Add a note on the concept of production. 7+7=14

## UNIT-IV

7. What is ozone and where is it in the atmosphere? What emissions from human activities lead to ozone depletion? Has the Montreal protocol been successful in reducing ozone depleting gases in the atmosphere?  $4+6+4=14$
8. Write notes on the following:  $7 \times 2 = 14$
- (a) Acid and nitrogen deposition
  - (b) Bioindicators and biomarkers of environment health

## UNIT-V

9. Explain the Wild Life (Protection) Act of 1972 in India. Add a note on the biodiversity act related to the international convention.  $8+6=14$
10. What are the major drivers of biodiversity changes in the environment? Explain how anthropogenic activities impact the environment.  $7+7=14$
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