

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022  
(First Semester)

Branch – ENVIRONMENTAL SCIENCE

PRINCIPLES OF ECOLOGY AND ENVIRONMENT

Time: Three Hours

Maximum: 50 Marks

**SECTION-A (5 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

1. In carbon cycle flow of energy is \_\_\_\_\_.  
A. Bidirectional                      C. Cyclic  
B. Linear                                 D. Irreversible
2. A frog eats a fly. The frog and fly are demonstrating \_\_\_\_\_.  
A. Mutualism                          C. Predator/Prey  
B. Competition                        D. Parasitism
3. .... a population that is adapted to local environmental conditions.  
A. Ecophene                          C. Umbrella Species  
B. Edge Effect                         D. Eco Type
4. In grassland area how much amount of rainfall is required?  
A. Low rainfall                         C. High rainfall  
B. Moderate rainfall                    D. No rainfall
5. Which of the following is the most sensitive to environmental change?  
A. Reptiles                              C. Insects  
B. Amphibians                         D. Mammals

**SECTION - B (15 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6. a. What are the seral stages of ecological succession?  
OR  
b. Give a brief illustration on Phosphorous cycle.
7. a. How does population ecology affect the environment? Discuss.  
OR  
b. What is mutualism and give three examples?

Cont...

8. a. What are the characteristics of community ecology?

OR

b. Give a detailed note about ecotone and edge effect.

9. a. Discuss the grassland ecosystem with its functions?

OR

b. Explain in detail about the Estuaries ecosystem.

10. a. List out the hotspot of biodiversity in India

OR

b. Tabulate the difference between Umbrella Species and Keystone Species with examples.

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a. Explain detail about the energy flow in the ecosystem with model.

OR

b. What are biotic and abiotic components of ecosystem? Discuss its importance.

12. a. How do populations of predators and prey vary in predatism?

OR

b. Analyse different types of species interaction.

13. a. Give a detailed note about ecological indicators.

OR

b. Define climax community with an example.

14. a. State ecological services and their importance.

OR

b. Analyse Climate, Vegetation, and Wildlife of desert Ecosystem.

15. a. Explain the ex situ conservation strategies of biodiversity.

OR

b. Elaborate Biosphere reserves and wild life sanctuaries of India.

Z-Z-Z

END