

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022  
(Fourth Semester)

Branch – BOTANY

ECOLOGICAL CONCEPTS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- 1 Identify the natural place of an organism or community  
(i) Niche (ii) Biome  
(iii) Habitat (iv) Habit
- 2 Find the other name of black soil.  
(i) Bhangar (ii) Humus  
(iii) Crystalline (iv) Regur
- 3 Which is not the characteristic of a population?  
(i) Natality (ii) Mortality  
(iii) Stratification (iv) Sex ratio
- 4 State which of the following measures – Lincoln index.  
(i) Population mortality rate (ii) Population natality rate  
(iii) Population size (iv) Population density
- 5 Name the attribute of plants occurring together with a similar ecology in definite strata:  
(i) Periodicity (ii) stratification  
(iii) Floristic (iv) Vitality
- 6 Where sunken stomata are found ?  
(i) Xerophytes (ii) Hydrophytes  
(iii) Halophytes (iv) Mangroves
- 7 Choose the correct option of energy flow in an – eco system.  
(i) Always unidirectional (ii) Always bidirectional  
(iii) In any direction (iv) Always down directional
- 8 Which of the following is also known as biogeochemical cycles?  
(i) material cycling (ii) gaseous cycle  
(iii) sedimentary cycling (iv) Waste recycling
- 9 Which of the Constitution of India provides that the state shall endeavor to protect and improve the environment and to safeguard the forest and wildlife of the country?  
(i) Article 42-A (ii) Article 88-A  
(iii) Article 82-A (iv) Article 48-A
- 10 It refers to any method which can be used to gather information about an object without coming in contact with it?  
(i) Database (ii) WWW  
(iii) Remote sensing (iv) GIS

Cont...

**SECTION - B (35 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

11. a Explain the biotic interactions.  
OR  
b Justify ecological niche is a significant part of an ecosystem.
12. a Analyse the population growth curve.  
OR  
b Classify the types of interactions.
13. a Explain the structure of community.  
OR  
b Discuss the ecotones.
14. a Determine energy flow in an ecosystem.  
OR  
b Explain the conservation of ecosystem.
15. a Prepare the list of natural resources and highlight their management.  
OR  
b Discuss the remote sensing technology.

**SECTION - C (30 Marks)**

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Categorise and explain the major types of habitats of Indian subcontinent.
- 17 Analyze the climatic factors associated with decomposition.
- 18 Elucidate the ecological adaptations of halophytes.
- 19 Enumerate the features of terrestrial ecosystems.
- 20 Interpret the applications of geographical information system.

Z-Z-Z

END