

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023  
(Fourth Semester)

Branch – BOTANY

ECOLOGICAL CONCEPTS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The study of units of vegetation of groups of organisms is called  
(i) Autecology (ii) Synecology  
(iii) Habitat ecology (iv) Applied ecology
- 2 In an insect population which of the following is the 'key factor'?  
(i) Increase of adults by birth (ii) Loss of larvae due to environment  
(iii) Increase of number of eggs (iv) Loss of adults through migration
- 3 Zonation of community can be constituted by  
(i) Horizontal division (ii) Vertical division  
(iii) Radial division (iv) Lateral division
- 4 The type of food chain operates in the decomposed litter is known as  
(i) Grazing food chain (ii) Linear food chain  
(iii) Detritus food chain (iv) Sigmoidal food chain
- 5 Which one of these is not a biotic resource?  
(i) Animal (ii) Crop  
(iii) Forest product (iv) Water

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the Concept of Niche.  
OR  
b Enumerate the major Habitat types you have studied.
- 7 a Analyze the outcome of Interspecific competition based on logistic model.  
OR  
b Highlight the significance of symbiosis in biotic relationship.
- 8 a Produce the characteristics of a community.  
OR  
b Prepare a list of adaptive features & Halophytes.
- 9 a Classify the biotic components of a pond ecosystem.  
OR  
b Explain the means of ecosystem restoration.
- 10 a Discuss about MAB.  
OR  
b Write about abiotic natural resources.

Cont...

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Analyse the changing pattern of climate and substantiate the initiatives of the organizations to overcome it.  
OR  
b Discuss the characteristic features of estuarine ecology.
- 12 a Assess various factors that regulate the population growth.  
OR  
b Explain hypothetically the different types of age pyramids.
- 13 a Elucidate ecological succession.  
OR  
b Analyse the synthetic characters of a community.
- 14 a Explain the measures to calculate the primary productivity of an ecosystem.  
OR  
b Justify why the flow of energy is always unidirectional.
- 15 a Trace the environmental hazard that affect the health of human population at various levels.  
OR  
b What is Remote Sensing? Assess the impact of Remote Sensing technology in forecasting the climate change.

Z-Z-Z

END