

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(First Semester)

Branch - ZOOLOGY

ECOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

- Which of the following statement is correct with respect to the food chain?
i) Every component of the food chain forms a trophic level
ii) Inter-relation between different food chains is known as a food web
iii) All the chains formed by nutritional relations is used to understand energy flow.
iv) All of the above
- Select the correct order from the followings, If the original day sediments are Subjected to high temperature and pressure, they successively change into rocks,
i) Shale- Schist -Slate ii) Slate -Schist -Shale
iii) Shale -Slate- Schist iv) Slate- Shale -Schist
- Shelford's law of tolerance suggests that organisms with a wide tolerance limit for environmental factors show
i) Narrow distribution with high population
ii) Wide distribution with high population
iii) Narrow distribution with low population
iv) Wide distribution with low population
- The main causes of ecological succession is _____
i) Wind ii) fire iii) soil erosion iv) All of these
- Incoln index measures
i) Population mortality rate ii) Population natality rate
iii) Population size iv) Population density
- Population growth form refers to the pattern of population growth. There are two basic patterns of population growth represented by _____ shaped growth curves.
i) 'J' and "S" ii) 'J' and "U" iii) 'U' and "S" iv) 'J' and "C"
- The log -normal hypothesis first mentioned by
i) Elton ii) Hutchinson iii) Grinnell iv) Preston
- The ratio of energy received from a raw energy source to energy spent to obtain the raw energy source is called as _____
i) consumption ratio ii) fuel ratio
iii) energy yield ratio iv) joule ratio
- All species of Lemur are endemic to which area?
i) Madagascar ii) Seychelles Island
iii) Galapagos Island iv) New Caledonia
- Identify the mismatched pair.
i) Tundra – Permafrost ii) Savanna – Acacia trees
iii) Prairie – Epiphytes iv) Coniferous forest – Evergreen trees

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

11. a) Enumerate the characteristics of the ecological succession.
OR
b) Comment on the features of lithosphere is the terrestrial part of the biosphere.
12. a) What is Predation? Explain how Parasites and predators have differ from each other.
OR
b) Explain about the mechanisms that maintaing the Homeostasis.
13. a) Comment on Classical theory on Population Ecology.
OR
b) Describes how individual organisms of a species are spread out in a Population distribution.
14. a) Narrate the steps to recycle the resources for using again to save environment and natural resources.
OR
b) Mention the Significance of Phosphorus Cycle.
15. a) Give a brief note on ways have taken to protect and conserve wildlife by Various governmental and nongovernmental organizations.
OR
b) Comment on why the social forestry program was not a huge success in India?

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

16. Describe about the Importance and Limitations of Ecological Pyramids.
17. What is Keystone Species? Explain its importances in Ecology.
18. Discuss about the different Population Attributes.
19. Define a Sulphur Cycle. Explain its pathway with a neat diagram.
20. Write an essay on the Ex-situ Conservation Strategies on Biodiversity Conservation.

Z-Z-Z

END