

Bago University
Department of Zoology
First Semester Examination, March 2019

Third Year BSc
(Zoology Specialization)
Answer ALL questions

Zool.3102
Ecology
Time Allowed: (3) Hours
(10 marks)

I. State TRUE or FALSE to the following statements.

1. The term ecology was first used in 1689 by the German biologist Ernst Haeckel.
2. A predator exploits its prey so much that the existence of population is threatened.
3. The biosphere is not dependent on solar energy.
4. The more rare species empirically are the first to disappear if an area becomes polluted.
5. Energy is required to drive a nutrient cycle.
6. The essential trace elements are only found in the body in very small quantities.
7. The photic zones typically 20-40 m in the more coastal waters.
8. Plants grow faster when the ambient atmosphere is enriched with CO₂.
9. The big filamentous algae cannot be eaten by the small herbivores.
10. The mineralization speed is fast and the nutrient cycling "tight" in the tropical rainforest.

II. Complete the following statements with appropriate words.

(10 marks)

1. Solar radiation consists of ----- waves.
2. Some populations are regulated mainly by ----- factors.
3. The biological activity of the ----- gives rise to a production of heat.
4. In an ecosystem, production is greater than respiration is called -----.
5. Age, seen from a geological time scale, affects species -----.
6. All nutrients have their own characteristics ----- cycle.
7. The carbon circulation in the biosphere has two distinct -----.
8. Acid rain can cause forest -----.
9. Two species populations can be linked together in a cohabitation called -----.
10. The herbivores serve as food for larger -----.

III. Answer ALL questions

(10 marks)

1. Define an ecosystem.
2. Write a short account on ozone.
3. Briefly state the term "ecosystem engineers".
4. Describe keystone species.
5. Write short notes on the edge effect with example.

IV. Answer ALL questions

(20 marks)

1. Describe the effects of UV radiation on life on land.
2. State the two types of food chains.
3. Mention two main types of symbiosis.
4. Explain briefly on indirectly damage of acid rain.

V. Answer ANY THREE questions

(30 marks)

1. Discuss primary production and productivity in ecosystems.
2. Discuss "acid rain" in sulphur cycle.
3. Give an example for competitive exclusion principle.
4. Explain the character displacement conducting with the beak height of Darwin's finches.
5. Write an essay on the transition zones and edge effects.
6. Giving a word diagram, describe the ecological succession with the facilitation.
