



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MAY/JUNE 2012 EXAMINATION

BIO 304 GENERAL ECOLOGY
TIME: 2 HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

- 1ai. Define the term ecosystem.
ii. List the components of an ecosystem giving two examples of each.
b. Distinguish between the following:
(i) a habitat and a niche (ii) autotrophs and heterotrophs
(iii) gross primary productivity and net primary productivity
(iv) Density-dependent and density-independent factors of population regulation
- 2ai. What is biogeochemical cycle?
ii. Photosynthetic plants are of gross importance in the ecosystem. Discuss.
iii. What are the primary reservoirs for the chemicals in these cycles?
b. With the aid of a well labeled illustration, describe the carbon cycle.
- 3ai. What do you understand by ecological succession?
ii. Humans are considered to be initiators of secondary succession. Discuss.
b. Write a short note on each of the following:
(i) Nitrogen fixation (ii) Food Chain (iii) Pyramid of numbers (iv) Community
- 4ai. Define a population.
ii. List some ways in which the explosive growth of human population affect the environment.
bi. What can be done to safely maintain nuclear power plants?
ii. Explain how phosphorous cycle differs from other nutrient cycles?
- 5ai. Describe the three types of survivorship curves giving an example of each.
ii. Enumerate some necessary actions to be taken in order to reverse the negative effects of human activities on the environment.
bi. List some special adaptations desert plants and animals have developed.
ii. What are the major factors that influence the formation of terrestrial biomes?

6ai. How is acid rain formed?

ii. Enumerate the damages caused by acid rain.

bi. What do you understand by global warming?

ii. How is global warming affected by industrialization?

iii. What are the harmful effects of decreasing the earth's ozone layer?