



EMBU UNIVERSITY COLLEGE
(A Constituent College of the University of Nairobi)

2015/2016 ACADEMIC YEAR

SECOND SEMESTER EXAMINATION

THIRD YEAR MAIN EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (ENVIRONMENTAL CONSERVATION AND NATURAL RESOURCES
MANAGEMENT)

SIZE 302: ENVIRONMENTAL HEALTH AND ECOTOXICOLOGY

DATE: APRIL 6, 2016

TIME: 08:30-10:30

INSTRUCTIONS: Answer any ten (10) questions (7 marks each)

1. a) Differentiate between ecotoxicology and environmental toxicology. (2 Marks)
b) Toxicants can accumulate and biomagnify. Explain this statement. (5 Marks)
2. Discuss the types of environmental hazards.
3. Evaluate the approaches used to determine the safety of hazardous substances, stating the implications for each approach.
4. Discuss the possible ecological consequences of anthropogenic increases in atmospheric carbon dioxide.
5. Discuss factors that would determine whether any part of the ocean receives atmospheric inputs that could alter biogeochemical processes.

6. Given there is a profound and rapid change in the acid/base balance of seawater, explain the implications for biological life and marine ecology feedback.
7. Outline the step by step cultural eutrophication process.
8. Using a diagram, describe how aerosol pollutants play a key role in the Earth's radiative budget and global change.
9. a) Describe the process of risk assessment in ecotoxicology. (2 Marks)
b) Explain why such a process is often difficult and controversial. (5 Marks)
10. The CO₂ cycle acts as a thermostat that regulates the temperature of the Earth. Discuss the statement.
11. Explain the effect of chemical pesticides on human health and environment.
12. Explain the effects of SO₂ on air, stating its anthropogenic and natural sources.

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