

The Open University of Sri Lanka
Faculty of Natural Sciences
B.Sc/ B. Ed Degree Programme



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| Department | : Zoology |
| Level | : 5 |
| Name of the Examination | : Final Examination |
| Course Code and Title | : ZYU5303/Environmental Toxicology |
| Academic Year | : 2024-2025 |
| Date | : 28.05.2025 |
| Time | : 1.30 pm- 3.30 pm |
| Duration | : 02 hrs |
| Index number | : |

General Instructions

1. Read all instructions carefully before answering the questions.
 2. This question paper consists of **Six (06)** questions in **one (01)** page.
 3. Answer any **four (04)** questions only. All questions carry equal marks.
 4. Answer for each question should commence from a new page.
 5. Draw fully labelled diagrams where necessary
 6. Having any unauthorized documents/ mobile phones in your possession is a punishable offense
 7. Use blue or black ink to answer the questions.
 8. Circle the number of the questions you answered in the front cover of your answer script.
 9. Clearly state your index number in your answer script
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1. Environmental pollutants can be classified into different toxicity groups based on their chemical nature and mode of action. Discuss the major toxicity groups of pollutants with their health effects. [100 marks]
2. Discuss how toxicants such as polycyclic aromatic hydrocarbons (PAHs) and ionizing radiation cause genetic damage. How do these mechanisms contribute to environmental cancers? [100 marks]
3.
 - i. Describe the concepts of bioaccumulation and biomagnification. [40 marks]
 - ii. How do these processes impact organisms at different trophic levels, possessing ecological implications? [60 marks]
4.
 - i. Discuss the role of biotransformation in the fate of toxicants within biological systems [40 marks]
 - ii. How do Phase I and Phase II metabolic reactions contribute to either detoxification or bioactivation of a toxicant? [60 marks]
5.
 - i. Compare acute and chronic toxicity tests in environmental toxicology [60 marks]
 - ii. Why is it important to conduct both types of assessments when evaluating chemical hazards? [40 marks]
6. Write short notes on any TWO (2) of the following. [50 marks each]
 - i. Intentional exposure environment
 - ii. Protecting the environment through regulations
 - iii. Importance of mesocosmal studies