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(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2023/2024 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH

COURSE CODE: HEH 414

COURSE TITLE: ENVIRONMENTAL TOXICOLOGY

DATE: 6.12.2023

TIME: 8.00-10.00 AM

INSTRUCTIONS TO CANDIDATES:

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- This paper consists of TWO (2) sections A, and B
- Each section has relevant instructions. Read the instructions specific for each section carefully, and answer the questions accordingly

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 2 Printed Pages. Please Turn Over



INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A (40 Marks).

1. Explain the term environmental toxicology stating what the word environment is comprised of. (4 marks).
2. Toxicity of the environment is enhanced by emissions of toxic elements into the environment. Explain air pollutants under the class origin. (4 marks).
3. State two natural sources of Sulphur dioxide and any two abatement methods of the element from the environment. (4 marks).
4. Explain the factors that affect membrane transport of chemicals/pollutants. (4 marks).
5. Classify insecticides basing on their functional groups. (4 marks).
6. Discuss the term toxicology stating the routes/modes of exposure to organisms. (4 marks).
7. State the factors influencing toxicity and end -point in toxicity. (4 marks).
8. Under dose – response relationships, explain the factors affecting an individual's response to a toxic chemical. (4 marks).
9. In occupational toxicology, there are parameters that are used to check on the exposure limits of chemicals, chemical mixtures or pollutants. State the key parameter listing the 3 ways in which it is expressed. (4 marks).
10. Enumerate the toxicity testing methods and state at least two species used in testing presence or the severity of toxicity. (4 marks).

SECTION B.

INSTRUCTIONS: THIS SECTION CONTAINS THREE QUESTIONS.ATTEMPT ANY TWO OF THE QUESTIONS.

11. Discuss the risks associated with the use of pesticides. (15 marks).
12. Pollutants are classified into two classes, state the classes giving 2 examples for each and describe the factors enhancing pollution under the following topics; Chemical, biological and physical. (15 marks).
13. As a public health student, discuss your roles in environmental toxicology in terms of health and development. (15 marks).