



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENVIRONMENTAL SCIENCE

DEPARTMENT OF ENVIRONMENTAL HEALTH

BACHELOR OF ENVIRONMENTAL SCIENCE HONOURS DEGREE IN PUBLIC HEALTH

POLLUTION PREVENTION AND CONTROL

EPH 2103

Examination Paper

October 2024

This examination paper consists of 2 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements:

- None

Examiner's Name: Mr T. Chirigo

INSTRUCTIONS

1. Answer ANY four (4) questions.
2. Each question carries 25 marks
3. Where a question contains subdivisions, the mark value for each subdivision is given in brackets
4. Illustrate your answer where appropriate with large, clearly labelled diagrams

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25
TOTAL	100

Question 1

(a) Pollution prevention and control explores the use of materials, processes or practices to reduce or eliminate the creation of pollutants or wastes at the source as well as minimizing effects emanating from their release and disposal. As a practitioner, discuss why we are or should be concerned about pollution and its prevention and control? **(16)**

(b) Discuss:

- i. Effects of acid deposition **(3)**
- ii. Prevention, monitoring and control of acid deposition **(6)**

Question 2

(a) Chlorofluorocarbons are believed to play a role in Ozone depletion, which would then lead to increased ultraviolet radiation (“UV-B”) reaching the earth’s surface and associated effects. Discuss the legal provisions of the Montreal Protocol with regards to Ozone depletion. **(13)**

(b) As a Public Health Practitioner, provide solutions that mitigate any three (3) effects of ozone depletion. **(12)**

Question 3

Tradable emissions and pollution rights are now being used as an environmental policy tool to facilitate the control of environmental pollutants. Can this be a panacea to the current and future environmental problems? Discuss. **(25)**

Question 4

(a) Indoor air pollution can have severe and far-reaching effects on human health. Discuss briefly:

- i. Three (3) effects of indoor air pollution **(9)**
- ii. The prevention, monitoring and control of indoor air pollution **(6)**

(b) In the workplace, it may sometimes not be feasible to eliminate radiation exposure of personnel from an external source. Identify and briefly discuss the principles of radiation protection of personnel from an external source in the workplace. **(10)**

Question 5

Critically assess the health impacts of various forms of air pollution and discuss how this assessment can inform current and future health policy directions in Zimbabwe **(25)**

Question 6

Discuss the below-mentioned global environmental health problems, under the following: description of the phenomenon, causes, effects, prevention and control:

- a. Acid rain **(13)**
- b. Smog, **(12)**