



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENVIRONMENTAL SCIENCE

DEPARTMENT OF ENVIRONMENTAL HEALTH

MASTER OF SCIENCE IN ENVIRONMENTAL HEALTH

ENVIRONMENTAL PROTECTION AND HEALTH

EEH 5102

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 Gumbo N

INSTRUCTIONS

1. Answer **QUESTION 1** and any **other Three** questions
2. Question 1 carries 40 marks and questions 2 to 6 carry 20 marks each.

MARK ALLOCATION

QUESTION	MARKS
1.	40
2.	20
3.	20
4.	20
5.	20
6.	20
TOTAL	100

QUESTION ONE

Given that an unidentified company has been secretly disposing key pesticide residues in pristine streams and rivers in Umguza catchment zone. Design a snapshot inquiry for the analysis of benthos and sediments in the field of Environmental Protection & Health citing appropriate techniques including the epistemological and ontological underpinnings there-of. **(40 Marks)**

QUESTION TWO

Describe how the first order toxicokinetic accumulation model can be used to extrapolate Biota Sediment Accumulation Factors (BSAF). **(20 marks)**

QUESTION THREE

An Environmental Health Practitioner has an overarching sphere of influence in lieu with other professions at any given enterprise. Discuss. **(20 marks)**

QUESTION FOUR

The subject of Environmental protection has been one of the most overlooked and underestimated area of public health concern for most people and enterprises, whether deliberate or as a result of mere complacency altogether. Discuss. **(20 marks)**

QUESTION FIVE

With particular reference to carbamates, discuss their effects on human health and the environment. **(20 marks)**

QUESTION SIX

Design a comprehensive checklist for heralding toxicity of xenobiotics and their related environmental impacts at gold mines in either Umzingwane or Mashaba communal areas. **(20 marks)**