



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENVIRONMENTAL SCIENCES

DEPARTMENT OF ENVIRONMENTAL HEALTH

**BACHELOR OF SCIENCE HONOURS DEGREE ENVIRONMENTAL SCIENCE IN
PUBLIC HEALTH**

RADIATION AND MEDICAL PHYSICS

EPH 2101

Special Supplementary Examination Paper

August 2024

This examination paper consists of 2 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Mr.N. Gumbo

INSTRUCTIONS

1. Answer any **FOUR** questions
2. Each question carries 25 marks

MARK ALLOCATION

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

QUESTION 1

Discuss the biological effects of radiation in human beings.

(25 Marks)

QUESTION 2

Outline how radiation detection and measurement is applicable at Zimbabwean ports of entry.

(25 Marks)

QUESTION 3

With aid of schematics trace the management of radio-active waste from nuclear units up to final disposal.

(25 Marks)

QUESTION 4

Discuss the virtues of nuclear energy accidents, paying particular attention to Fukushima and Chernobyl.

(25 Marks)

QUESTION 5

How does environmental radiation surveillance and monitoring minimise pollution?

(25 Marks)

QUESTION 6

Discuss how radio nuclides can be of paramount value in the medical field and industry.

(25 Marks)