



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES

SCHOOL OF NATURAL AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGY, CHEMISTRY AND PHYSICS

QUALIFICATION : BACHELOR OF SCIENCE HONOURS	
QUALIFICATION CODE: 08BOSH	LEVEL: 8
COURSE: ENVIRONMENT PHYSICS	COURSE CODE: ENP811S
SESSION: JUNE 2023	PAPER: THEORY
DURATION: 3 Hours	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Prof Sylvanus A. Onjefu
MODERATOR:	Dr Valentine T. Chabata

INSTRUCTIONS

1. Write all your answers in the booklet provided.
2. Begin each question on a new page

PERMISSIBLE MATERIALS

1. Non-Programmable Scientific Calculator

THIS QUESTION PAPER CONSISTS OF 3 PAGES
(Including this front page)

QUESTION 1 [25]

- 1.1 Define environmental sustainability and give four levels where environmental sustainability can be applied. (4)
- 1.2 Environmental Scientist are growing increasingly concern about the elevated levels of carbon dioxide. Discuss. (5)
- 1.3 Briefly explain how human population have impacted our world negatively from the Point of view of global, regional and local level. (6)
- 1.4 Explain the following terms: population, community and ecosystem. (6)
- 1.5 What is the mesosphere and what characterises temperature in the mesosphere? (4)

QUESTION 2 [22]

- 2.1 Explain the term surface wind and how it is formed. (5)
- 2.2 Differentiate between polar climate zone and high elevation climate zone. (6)
- 2.3 Describe what makes the earth to quake. (5)
- 2.4 Explain the following words as apply to the natural disaster call earthquake:
 - 2.4.1 Fault zones. (2)
 - 2.4.2 Focus. (2)
 - 2.4.3 Epicenter. (2)

QUESTION 3 [20]

- 3.1 Describe one method of Identifying carcinogenic substances. (2)
- 3.2 Why do you think the method of identifying carcinogenic substance is indirect and uncertain? (4)
- 3.3 Describe the carbon cycle. (5)

3.4 Explain the layer of the atmosphere called the exosphere. (4)

3.5 Describe the troposphere and its importance to life on earth. (5)

QUESTION 4 [33]

4.1 Classify air pollutants and give two examples of each. (9)

4.2 What is meant by Smog? What are the two types of Smog? (4)

4.3 Discuss the cause and effects of two types of Smog. (10)

4.4 Why is plume behaviour important? (3)

4.5 Which plume is the most favourable with respect to minimising air pollution and why? (3)

4.6 Illustrate with the aid of a neat diagram how atmospheric condition give rise to a lofting plume. (4)

END