



**NAMIBIA 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

13 Jackson Kaujeua Street T: +264 61 207 2012
Private Bag 13388 F: +264 61 207 9012
Windhoek E: dbcp@nust.na
NAMIBIA W: www.nust.na

QUALIFICATION : BACHELOR OF SCIENCE (HONOURS)	
QUALIFICATION CODE: 08BOSC	LEVEL: 8
COURSE: ENVIRONMENTAL INDUSTRIAL AND MEDICAL BIOTECHNOLGY	COURSE CODE: EIM821S
DATE: JANUARY 2025	SESSION: 1
DURATION: 3 HOURS	MARKS: 120

SECOND/SUPPLEMENTARY OPPORTUNITY: QUESTION PAPER

EXAMINER: *Prof Percy Chimwamurombe*
MODERATOR: *Dr Jean Damascene Uzabakiriho*

INSTRUCTIONS

1. Answer all questions on the separate answer sheet.
2. Please write neatly and legibly.
3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS:

1. Non-Programmable Calculator

ATTACHEMENTS

1. NONE

This paper consists of 2 pages including this front pages.

SECTION A**[60]**

1. Describe any five applications of extremophiles which are beneficial to mankind. (10)
2. Briefly describe biological wastewater treatment. (10)
3. Describe drug metabolizing enzymes and evaluate the applications. (10)
4. Appraise gene therapy in Namibia. (10)
5. Describe the step of establishing a bio-enterprise in Namibia. (10)
6. Describe using examples the use of pharmaceutical biotechnology. (10)

Section B (Essays Section)**[60]**

1. Considering the problems leading to low agricultural productivity in Namibia, write a concise essay where you will be giving biotechnological solutions to this low agricultural productivity. (30)
2. Use your understanding of DNA forensics and write a proposal of how it could be used to solve three prominent civil criminal problems in Namibia. (30)

-----END OF EXAMINATION QUESTION PAPER-----