



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH AND APPLIED SCIENCES**

**DEPARTMENT OF NATURAL AND APPLIED SCIENCES**

<b>QUALIFICATION : BACHELOR OF SCIENCE (HONOURS)</b>	
<b>QUALIFICATION CODE: 08BOSC</b>	<b>LEVEL: 8</b>
<b>COURSE CODE: EIM821S</b>	<b>COURSE NAME: ENVIRONMENTAL INDUSTRIAL AND MEDICAL BIOTECHNOLOGY</b>
<b>SESSION: JANUARY 2019</b>	<b>PAPER: THEORY</b>
<b>DURATION: 3 HOURS</b>	<b>MARKS: 120</b>

<b>SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER:</b>	<b>Prof Percy Chimwamurombe</b>
<b>MODERATOR:</b>	<b>Dr Jean-Damascene Uzabakiriho</b>

<b>INSTRUCTIONS</b>	
<ol style="list-style-type: none"><li>1. Answer <b>ALL</b> the questions.</li><li>2. Write clearly and neatly.</li><li>3. Number the answers clearly.</li></ol>	

***PERMISSIBLE MATERIALS***

Non-programmable Calculators

**ATTACHMENTS**

None

**THIS QUESTION PAPER CONSISTS OF 2 PAGES (Including this front page)**

**SECTION A****[60 marks]**

1. Studying extremophiles be of benefit to mankind. Comment on this statement. (10)
2. Write short notes on microbial wastewater treatment. (10)
3. Explain the process of setting up a new industrial product. (10)
4. Evaluate the benefit of understanding drug metabolizing enzymes. (10)
5. What is personalized medicine? Critically appraise it. (10)
6. Describe using examples the use of pharmaceutical biotechnology. (10)

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

1. Considering the problems leading to low 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 criminal problems in Namibia. (30)