



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF ENGINEERING AND SPATIAL SCIENCES**

**DEPARTMENT OF MINING AND PROCESS ENGINEERING**

<b>QUALIFICATION: BACHELOR OF ENGINEERING IN METALLURGY</b>	
<b>QUALIFICATION CODE: 08BMET</b>	<b>LEVEL: 7</b>
<b>COURSE CODE: MPW721S</b>	<b>COURSE NAME: MINE AND PROCESS WASTE MANAGEMENT 314</b>
<b>SESSION: NOVEMBER 2022</b>	<b>PAPER: THEORY</b>
<b>DURATION: 2 HOURS</b>	<b>MARKS: 45</b>

<b>FIRST OPPORTUNITY QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	<b>Ms. Adeltraud Mughongora</b>
<b>MODERATOR:</b>	<b>Professor Harmony Musiyarira</b>

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Answer all questions.</li><li>2. Read all the questions carefully before answering.</li><li>3. Marks for each questions are indicated at the end of each question.</li><li>4. Please ensure that your writing is legible, neat and presentable.</li></ol>

**PERMISSIBLE MATERIALS**

1. Examination paper.
2. Non-programmable calculator.

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



**Question 1** [5 marks]  
Outline five social conditions that will indicate favorable social performance?

**Question 2** [5 marks]  
Briefly explain the main purpose of conducting an environmental impact assessment?

**Question 3** [5 marks]  
The environmental management act no. 7 of 2007 of Namibia, came into effect in February 2012. Outline five important principles that the act is based on, that serve as guidelines for activities of major projects that may impact the environment.

**Question 4** [5 marks]  
A project is said to be sustainable when it performs favorably in all three pillars, that is, environment, economic and social. What are some baselining data that need to be collected for benchmarking purposes, when measuring social performance?

**Question 5** [5 marks]  
Outline any five important factors that has an influence on the mining sector sustainability

**Question 6** [5 marks]  
Explain why metals such as cadmium and mercury are specifically more harmful to humans compared to other toxic elements?

**Question 7** [5 marks]  
Briefly explain why decant facilities are required in tailings dam construction and how inadequate decant design will affect the tailings dam?

**Question 8** [5 marks]  
Briefly discuss some of the disadvantages of the upstream method?

**Question 9** [5 marks]  
Briefly explain how acid mine drainage occurs on a mine site

