



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES

SCHOOL OF AGRICULTURE AND NATURAL RESOURCE SCIENCES

DEPARTMENT OF NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT	
QUALIFICATION CODE: 07BNRS	LEVEL: 7
COURSE CODE: EMP721S	COURSE NAME: ENVIRONMENTAL MANAGEMENT PRINCIPLES
DATE: NOVEMBER 2024	
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Dr Tendai Nzuma
MODERATOR:	Prof Hilton Ndagurwa

INSTRUCTIONS
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination question paper
2. Answering book
3. Calculator and Ruler

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

Question 1: Definitions (20 Marks)

Define the following terms and provide an example for each (2 marks each: 1 for the definition, 1 for the example):

- a. Environmental Impact Assessment (EIA)
 - b. Ecosystem Services
 - c. Mitigation Hierarchy
 - d. Sustainable Development
 - e. Biodiversity
 - f. Cleaner Production
 - g. Strategic Environmental Assessment (SEA)
 - h. Pollution
 - i. Restoration Ecology
 - j. Compliance Auditing
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Question 2: Short Answer Questions (20 Marks)

- (a) Explain the role of key stakeholders in the Integrated Environmental Management process in Namibia. (10 Marks)
 - (b) Describe the key components of a solid waste management plan for a small community in Namibia. (10 Marks)
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Question 3: Short Answer Questions (20 Marks)

- (a) What are the main stakeholders involved in the Environmental Impact Assessment (EIA) process? Explain their roles briefly. (10 Marks)
 - (b) Discuss how climate change affects ecosystem services in Namibia. (10 Marks)
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Question 4: Long Answer and Case Study (40 Marks)

Case Study:

A new mining project has been proposed in a semi-arid region of Namibia, where water resources are limited, and biodiversity is high. The project developers have submitted an Environmental Management Plan (EMP) to minimize the environmental impacts of the project. The EMP includes a mitigation hierarchy and restoration plans for the mining area after project completion.

- (a) Discuss the steps in the mitigation hierarchy that the mining company should take to minimize the environmental impacts of the project. (15 Marks)
 - (b) The mining project is expected to produce significant amounts of solid waste. Calculate the reduction in waste if 30% of the 1,000 tons of waste is recycled, 20% is treated for reuse, and the rest is disposed of in a landfill. (10 Marks)
 - (c) Evaluate the effectiveness of restoration ecology in managing post-mining landscapes in Namibia. (15 Marks)
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THE END

TOTAL: 100 MARKS