



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH AND APPLIED SCIENCES

DEPARTMENT OF HEALTH SCIENCES

QUALIFICATION: ENVIRONMENTAL HEALTH SCIENCES	
QUALIFICATION CODE: 08BEHS	LEVEL: 6
COURSE CODE: WSM 611S	COURSE NAME: WASTE MANAGEMENT
SESSION: JULY 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY/ SUPPLEMENTARY EXAMINATION QUESTION PAPER	
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INSTRUCTIONS	
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.	

PERMISSIBLE MATERIALS:
NONE

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

SECTION A (20 MARKS)

QUESTION 1

[10 MARKS]

- 1.0 Assess the following statements and indicate whether they are **true or false**. Write only the number of the question and next to it true for a true statement and false for a false statement next to the number of the question.
- 1.1 Pathogen destruction is achieved when compost is at a temperature greater than 60 degree Celsius for at least three days. (1)
- 1.2 Open dumping needs less labour and supervision. (1)
- 1.3 Ministry of Environment and Tourism regulates water pollution, hazardous and solid waste based on current legislation. (1)
- 1.4 Management of a good solid waste management system needs inputs from a range of disciplines. (1)
- 1.5 Radioactive waste is treated in Namibia. (1)
- 1.6 Village Development Committee should encourage active participation in waste management activities. (1)
- 1.7 National Waste Management Policy enforces disposal of undesirable medicines. (1)
- 1.8 The proposed incinerator plant should have a wastewater treatment plant. (1)
- 1.9 A typical hospital that segregates waste produces about 50% of domestic waste. (1)
- 1.10 An Autoclave consists of a metal chamber with a door and is surrounded by a steam jacket. (1)

QUESTION 2

[10 MARKS]

- 2.0 Match the term in Column A with the correct description/definition in Column B. (5)

COLUMN A	COLUMN B
2.1 Acid Rain	A. Should adhere to all waste regulations and guidelines
2.2 Community Based Organization	B. Can take care of all type of solid waste except garbage.
2.3 Tires	C. Top soil stock pile sites.
2.4 Open dumping	D. Precipitation of high levels of pollutants.
2.5 Landfill operation site	E. Pose vector health threats to a community.

2.6 Give the full meaning of the following abbreviations.

- A. HCV (1)
- B. CDC (1)
- C. EIA (1)
- D. SME (1)
- E. IWMP (1)

SECTION B (40 MARKS)

QUESTION 3

[20 MARKS]

3. Define the following Terms:

- 3.1 Redemption Centre (2)
- 3.2 Energy recovery (2)
- 3.3 Conversion (2)
- 3.4 Transfer station (4)
- 3.5 Table the comparison of landfills and incinerator. (10)

QUESTION 4

[20 MARKS]

- 4.1 Write a short notes on Leachate production and groundwater monitoring. (10)
- 4.2 Describe the integrated solid waste management and waste avoidance. (10)

SECTION C (40 MARKS)

QUESTION 5

[20 MARKS]

- 5.1 Discuss the monitoring and evaluation indicators for the implementation of the National Waste Management Policy. (10)
- 5.2 Namibia is a co-signatory of three conventions. Name and explain the conventions. (10)

QUESTION 6

[20 MARKS]

- 6. Elaborate on the National Waste Management Principles. (20)

GOOD LUCK