

NAMIBIA UNIVERSITY

OF SCIENCE AND TECHNOLOGY

Faculty of Health, Applied Science and Natural Resources

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES SCIENCES
DEPARTMENT OF NATURAL RESOURCE SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT		
QUALIFICATION CODE: 07BNTC	LEVEL: 7	
COURSE CODE: WWR711S	COURSE NAME: Water and Wetland Resources Management	
DATE: July 2023		
DURATION: 3 HOURS	MARKS: 150	

SECOND OPPORTUNITY EXAMINATION QUESTION PAPER		
EXAMINER(S)	Mr R. Kavari	
MODERATOR:	Mrs. N. Nashipili	

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

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

QUESTION 1 Terminology

A: Define 1.1 1.2 1.3 1.4 1.5 B: 1.6	the following terminologies, using realistic examples from Namibia or Southern Africa: Water purification Wetlands Water deficit Water and Wetland Resources Management Euphotic zone Give a correct word/term for the following: A water utility that is responsible for bulk water supply in Namibia.	(2) (2) (2) (2) (2)
1.7	The measure of how muddy the water is or the measure of suspended solid particles in the water.	(1)
1.8	Weathering of limestone by water.	(1)
1.9	A type of wetland referred to as standing water that is well vegetated, such as Vleis and Marshes, Springs and Seeps (rainwater pools in Zambezi, Gai-Ais spring etc.).	(1)
1.10	A term used to describe fish species that are adapted to living in fast flowing water.	(1)
1.11	A set of conditions a wetland must meet to qualify as an internationally important wetland.	(1)
1.12	An ephemeral river with its source (upper-stream) in Khomas Highland and its mouth at Walvis Bay (Atlantic Ocean).	(1)
1.13	An area of land, bounded by natural features such as hills or mountains from which surface and sub surface water flows into rivers and lakes. Water flows into, and collects in, the lowest areas in the landscape.	(1)
1.14	A substance produced as a by-product during the anaerobic process where bacteria decompose organic materials at the sea floor/benthic.	(1)
1.5	Groundwater that remains deep underground although it is visible from the surface e.g. sinkhole lakes such as the Otjikoto lake and wells.	(1)
		[20]
QUESTIO	N 2 Namibia`s Water Resources	
2.1	Use realistic examples to assess and evaluate the progress made in Namibia with reference to water resources management.	(10)

2.2	Water scarcity is a constraint on national development in Namibia. Use realistic examples to elaborate this statement.	(5)
		[15]
QUESTIO	N 3 Ramsar Convention	
3.1	Explain the benefits of designating a certain wetland as a Ramsar site.	(5)
3.2	Explain how Bwabwata-Mahango core area (Lower Okavango River section in Namibia) meets the Ramsar criteria.	(5)
QUESTIOI	N 4 Coastal Wetlands	[10]
4.1	Explain the impact of the upwelling system along the west coast of Namibia.	(5)
4.2	Discuss the conservation issues/concerns on the Desert coastal wetlands of Namibia.	(10)
4.3	What are the values of coastal wetlands to birds in Namibia?	(5)
		[20]
QUESTIO	N 5 Riverine Wetlands	
5.1	Discuss any five conservation issues on the Zambezi River systems.	(5)
5.2	Discuss any five conservation concerns on the Kunene River.	(5)
5.3	Briefly, discuss the flow regime of the Okavango River. Also include, where and how the Kavango River is protected.	(10)
5.4	Explain how ephemeral rivers and their catchments sustain people and development in western Namibia. Use realistic examples.	(10)
		[30]
	N 6 Lacustrine Wetlands	
QUESTIO	V 6 Lacustrine Wetlands	
QUESTIOI 6.1	Discuss the process of eutrophication and its threats to artificial lentic wetland systems such as impoundments/dams.	(10)

	Namibia.	(7)
6.3	Use realistic examples in Namibia, to explain what floodplain lakes are.	(3)
		[20]
QUESTIO	N 7 Palustrine Wetlands	
survives t Write a b conservar	ephemeral rainwater pools are important palustrine wetlands where certain species he drying up periods of these pools. One of those species is the endemic Caprivi Killifish. rief note; where you indicate the conservation status of the Caprivi Killifish, in which ncy it occurs, how it survives the drying up of ephemeral rainwater pools and the main genic activity that threaten the survival of this species.	(6)
7.2 Brief	fly, discuss the ecological values of seeps and springs in Namibia.	(4)
7.3 Clearly, explain any five conservation issues affecting the palustrine wetlands in Namibia. Use relevant examples.		
	Į.	[20]
QUESTIOI	N 8 Integrated Water Resources Management	
	any five parameters and or variables that you can monitor to ensure successful ent of water and wetland resources.	(5)
8.2 Evaluate the concept and value of river basin management at national and international level.		(10)
	1	[15]
	F. J	

End TOTAL [150]