



**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
<ol style="list-style-type: none">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)

- 2.2 Water scarcity is a constraint on national development in Namibia. Use realistic examples to elaborate this statement. (5)
- [15]

QUESTION 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)

QUESTION 4 Coastal Wetlands

- 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)

QUESTION 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)

QUESTION 6 Lacustrine Wetlands

- 6.1 Discuss the process of eutrophication and its threats to artificial lentic wetland systems such as impoundments/dams. (10)
- 6.2 Clearly explain how sinkhole lake and caves are formed. In addition, discuss how the formation of lakes and caves enhance groundwater recharge in the Karst area in

- Namibia. (7)
- 6.3 Use realistic examples in Namibia, to explain what floodplain lakes are. (3)
- [20]

QUESTION 7 Palustrine Wetlands

- 7.1 The ephemeral rainwater pools are important palustrine wetlands where certain species survives the drying up periods of these pools. One of those species is the endemic Caprivi Killifish. Write a brief note; where you indicate the conservation status of the Caprivi Killifish, in which conservancy it occurs, how it survives the drying up of ephemeral rainwater pools and the main anthropogenic activity that threaten the survival of this species. (6)
- 7.2 Briefly, 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. (10)
- [20]

QUESTION 8 Integrated Water Resources Management

- 8.1 Name any five parameters and or variables that you can monitor to ensure successful management of water and wetland resources. (5)
- 8.2 Evaluate the concept and value of river basin management at national and international level. (10)
- [15]

End
TOTAL [150]