

<b>FACULTY</b>	<b>AGRICULTURE, ENGINEERING &amp; NATURAL SCIENCES</b>
<b>SCHOOL</b>	<b>SCIENCE</b>
<b>DEPARTMENT</b>	<b>ENVIRONMENTAL SCIENCE</b>
<b>SUBJECT</b>	<b>INTEGRATED NATURAL RESOURCES MANAGEMENT II</b>
<b>SUBJECT CODE</b>	<b>EBL 3852</b>
<b>DATE</b>	<b>NOVEMBER 2021</b>
<b>DURATION</b>	<b>3 hours</b>
<b>MARKS</b>	<b>120</b>

## **SUPPLEMENTARY/SPECIAL EXAMINATION**

**Examiners:** Prof I. Mapaure (University of Namibia)

Dr C. Hay (University of Namibia)

**Moderator:** Prof C.T. Downs (University of KwaZulu-Natal)

<b>This examination paper consists of 3 pages (including the front page)</b>
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### ***Instructions***

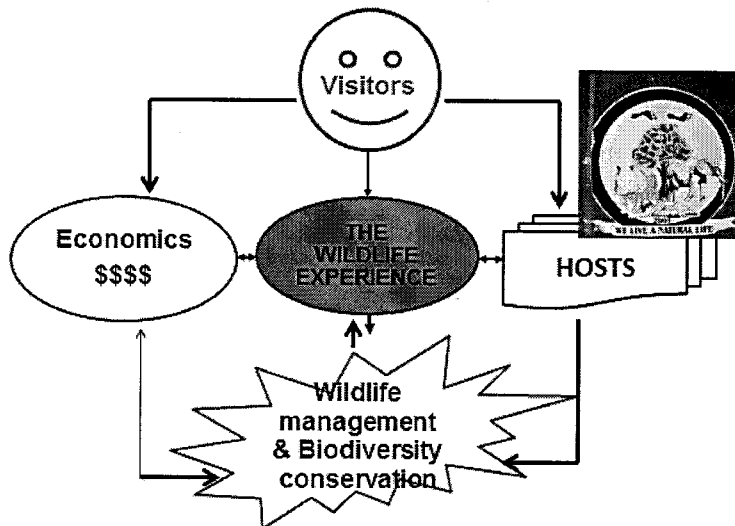
- Answer **all** questions from Section A (Total of 60 marks)
- Answer **only 2** questions from Section B. (Total of 60 marks)
- The use of scientific calculators is allowed

## SECTION A

Answer **ALL** questions from Section A.

### **Question 1** [30 marks]

- 1.1. Discuss what is done during Step 4 of a Cost-Benefit Analysis (CBA) process. (9)
- 1.2. Section 22(1b) of the Namibia Forest Act 13 of 2001 states: *No person shall, on any land which is not part of a surveyed erven of a local authority area as defined in section 1 of the Local Authorities Act, 1992 (Act No. 23 of 1992) cut, destroy or remove any living tree, bush or shrub growing within 100 metres of a river, stream or watercourse.* Despite this Provision, many rural people still cut down trees within 100 m of a river without obtaining licenses. Briefly discuss why this is the case. (6)
- 1.3. Governments are promoting and encouraging the marketing and sale of non-timber forest products (NTFPs) by local communities to achieve conservation goals. Briefly discuss the link between the commercialisation of NTFPs and forest conservation. Include aspects of the sustainability of NTFP harvesting. (5)
- 1.4. Use the diagram below to critically review the links between wildlife management and biodiversity conservation with the wildlife-based tourism industry. (10)



Source: Mapaure (2017)

### **Question 2** [30 marks]

- 2.1. Explain the reasons for conflicts between people in the water sector? (8)
- 2.2. Elaborate on the parameters you will need to study to determine the health of the deep-water hake stock along the Namibian coast. (8)
- 2.3. Differentiate between the challenges faced by water managers of the Zambezi River and those managing Hardap Dam near Mariental. (14)

*Sub-total marks (Section A) = 60*

## **SECTION B**

Answer any **TWO** questions from Section B.

### **Question 1 [30 marks]**

Critically discuss the harvesting strategies which Game Ranch Managers may use when they want to harvest game animals on their Ranches. Give specific examples where applicable. (30)

### **Question 2 [30 marks]**

Develop a protocol that a company needs to follow in Namibia for conducting an Environmental Impact Assessment for any new development. (30)

### **Question 3 [30 marks]**

3.1. Most marine fisheries are dynamic because of the fluctuations in the marine environment and the impacts that people have on the fish stocks. Explain the phases that the pilchard stock in Namibia went through over recent times. (12)

3.2. Highlight the topics you must consider as challenges that should be incorporated into an integrated coastal zone management plan for a Namibian coastal area. (9)

3.3. Explain what drives the need for an Integrated Water Resource Management Plan for Namibia? (9)

*Sub-total marks (Section B) = 60*

*Grand Total Marks =120*

**\*\*\*END OF QUESTION PAPER \*\*\***