201

1st SEM. 2017/2018



UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: BSc. in Agricultural Economics and Agribusiness Management Year 4

COURSE CODE: AEM 403

TITLE OF PAPER: ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS

TIME ALLOWED: TWO (2): HOURS

INSTRUCTION: 1. ANSWER ALL FOUR QUESTIONS
2. EACH QUESTION CARRIES 25 POINTS

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**Question 1**

a) What is a free-rider **5 MARKS**

b) What is market failure? **5 MARKS**

c) What is an externality? **5 MARKS**

a) Define property rights and discuss different types of property rights. **10 MARKS**

**Question 2**

**a)** In economics, the environment is considered a complex asset that provides different services. Discuss four (4) services that are provided by the environment. **10 MARKS**

b) The presence of externalities causes market failure. Discuss with a help of a figure why an unregulated market with a negative externality (pollution) leads to an inefficient outcome (inefficiency with an external cost). **15 MARKS**

**Question 3**

a) In fisheries, is maximum sustainable yield and effort *equal* to the static efficient sustainable yield and effort? Discuss extensively with the help of figures. **10 MARKS**

b) If maximum sustainable yield and the static efficient sustainable yield *are not equal* when will they be equal? **5 MARKS**

c) Is there a difference between the static efficient sustainable yield and the dynamic efficient sustainable yield? Explain. **5 MARKS**

d) If the static efficient sustainable yield and the dynamic efficient sustainable yield *are different* when will they be equal? **5 MARKS**

**Question 4**

Mlilwane game reserve is threatened by development in the surrounding area. Pollution and other impacts from this development could destroy the game reserve, resulting in a serious decline in, or total loss of the site's ability to provide recreational services. As an Environmental and natural resource economist you are tasked with estimating the value of Mlilwane game reserve (or the value of the recreational services of Mlilwane game reserve) using the zonal travel cost method. Discuss in length how you will go about to determine the value of preserving Mlilwane game reserve using the zonal travel cost method?