

1st SEM. 2017/2018



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UNIVERSITY OF SWAZILAND

FINAL 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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CHIEF INVIGILATOR

Question 1

- a) Define the following terms
 - i. Forest economics 5 MARKS
 - ii. Load shedding 5 MARKS
 - iii. Natural equilibrium 5 MARKS

- b) Distinguish between:
 - i. Private cost and externality cost 5 MARKS
 - ii. Current Annual Increment (CAI) and Mean Annual Increment(MAI) 5 MARKS

Question 2

- a) From biological point of view what is the optimum harvesting stage of timber? 5 MARKS
- b) From economists point of view when should trees be cut down? Explain logically. 5 MARKS
- c) How is the Hartman Model different from the Faustmann model? Explain briefly. 5 MARKS
- d) What is energy efficiency and why should energy efficiency be promoted? 10 MARKS

Question 3

- a) Why should water be treated as an economic good? Discuss 5 reasons. 10 MARKS
- b) As an environmental and natural resource manager, how can you advice the Swaziland government to address the water challenges in the country? 15 MARKS

Question 4

- a) Discuss the Schaefer (1957) biological model of the natural population growth of fish and compare and contrast maximum sustainable yield and effort, and the static efficient sustainable yield and effort 10 MARKS
- b) Ocean fisheries are typically open-access resources so they impose external costs to present and future generations through over exploitation of the fish stock. Discuss 5 public policies that can help minimize/eliminate the ocean fisheries problem(s). 15 MARKS