FACULTY	AGRICULTURE, ENGINEERING AND NATURAL RESOURCES		
SCHOOL	AGRICULTURE AND FISHERIES SCIENCES		
DEPARTMENT	ANIMAL PRODUCTION, AGRIBUSINESS AND ECONOMICS		
SUBJECT	RESOURCE ECONOMICS		
SUBJECT CODE	AAER 3781		
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DURATION	**3 Hours**	**MARKS**	100

FIRST OPPORTUNITY EXAMINATION

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Moderator: Prof. Helmke, Sartorius von Bach

This EXAM consists of THREE (3) pages including this front page

Instructions

- Answer all questions
- Each question is worth 25 marks
- Please write legibly and number your questions clearly

UNIVERSITY OF NAMIBIA EXAMINATIONS

QUESTION 1 **[25 MARKS]**

1.1 Match the following concepts to the statement that best describe it. Only write the number and corresponding letter. E.g. 1=F [20]

1. Imperfect Market Structures	A. Is the value that consumers receive from an allocation minus it cost them to obtain it
2. Perfect Market Structures	B. Is the value one obtains by directly using a natural resource
3. Option value	C. Is the value that people place on the knowledge that a resource will be available for future generations
4. Producer Surplus	D. When one of the participants in an exchange of property rights is able to exercise an inordinate amount of power over the outcome.
5. Consumer Surplus	E. When parties involved in a transaction do not have equal knowledge about the product or service to be exchanged
6. Existence value	F. Is the value that producers/sellers receive from an allocation minus it cost them to produce
7. Government Failure	G. Promote efficient allocation of resources because participants in an exchange of property rights is not able to exercise an inordinate amount of power over the outcome.
8. Bequest value	H. Arises when special interest groups engage in rent seeking behaviour from policy makers
9. Asymmetric Information	I. The value placed by people on the maintenance of future use of a resource
10. Direct use value	J. The value people place on a resource that they do not intend to ever use

1.2 TRUE OR FALSE QUESTIONS [5]

(a) Renewable resources are resources that occur naturally and does not replenishes itself readily through biological/ natural processes over time. True or False. [1]

(b) The chief normative economic criterion for choosing among various outcomes occurring at the same time is called *dynamic efficiency.* True or False. [1]

(c) A pareto efficient outcome is said to be an outcome that allows at least one agent to be worse off while at least two agents are better off. True or False. [1]

(d) A price floor is a form of support given by government to consumers to make the products more affordable to them, True or False. [1]

(e) A production possibility frontier tends to depict the combination of inputs that can be combined to produce the same amount of an output. True or False. [1]

QUESTION 2 **[25 MARKS]**

Assume that domestic broiler producers in Namibia lobby the government for protection, and receive it in the form of a price floor.

Suppose that the inverse demand and supply of broiler meat are given by:

$P = 100 - Q^d, and$

$P = 10 - Q^s$

Where P is the price of broiler meat in N$ per kg, and Q is the quantity of broiler meat in millions of kilograms.

REQUIRED:

(a) Calculate the equilibrium price (P^e)and quantity (Q^e)of broiler meat and indicate the associated economic surplus derived from this allocation. [10]

(b) Assume that the price floor is set at N$ 70 per kg. Using graphs to illustrate analyze the welfare effects of this price floor on society. [15]

QUESTION 3 **[25 MARKS]**

The model estimating expected visitation rates at different travel costs for Poppa Falls on the Kavango River is represented by P = 90 – 5Q created using the zonal approach to estimating travel costs. Where P= Cost to Visit in N$ per visit; and Q= Annual visits per capita. Suppose that for a particular zone (A), the average cost to visit the Poppa Falls is N$50.

REQUIRED:

(a) Draw a graph depicting the model and estimate the expected number of visitations from zone A [8]

(a) If it is estimated that 10, 000 people visit the lodge from zone A. Calculate the value that visitors from zone A attach to this Lodge using the Travel Cost method. [5]

(b) If the increase in fuel prices due to the Ukraine and Russian war will increase the average cost to visit to N$70. What is the effect on the value that people attach to Poppa Falls. [12]

QUESTION 4 **[25 MARKS]**

Despite the abundance of water on planet earth availability of clean and portable water remains a challenge among many inhabitants on earth. The reality is that supplying water to support mankind's needs has not kept pace with population and economic growth.

REQUIRED:

(a) Discuss the factors that contribute to the general scarcity of the water resource to meet the needs of mankind. [10]

(b) Pricing water fairly and equally is important to sustain and extend the water and sanitation system. Discuss the various water pricing methods that are used. [15]