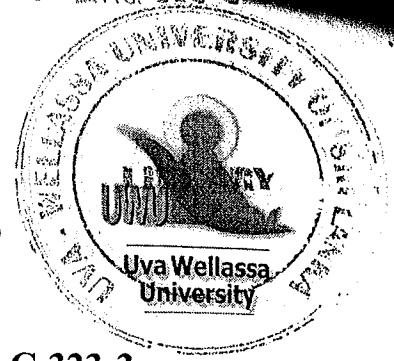


Uva Wellassa University
B.Sc. in Export Agriculture



End Semester Examination June/July 2009
Year III Semester II

Theories of Agricultural Resource Management EAG 323-3

Instructions

Answer **all** questions. Each question bears equal marks.

- No. of questions : Five (05)
- No. of pages : Two (02)
- Total marks allocated : 100%
- Time : Three Hours (03 hrs)

1.
 - a. Define the following terms;
 - i. Renewable resources.
 - ii. Non-renewable resources.
 - iii. Open access resources.
 - iv. Common pool resources.
 - b.
 - i. Briefly explain the variables in fishery.
 - ii. **“Increase in fishing effort always increases the profit in fishery”.**
Comment on this.
 - c. Discuss how you manage water resources.
2. How do you use your knowledge in production economics for agricultural resource management?
3.
 - a. Briefly explain Normative Criteria for decision making.
 - b. Discuss market based solution towards externalities.
 - c. Can emission standards be adopted in a cost effective manner?
 - d. How do the private parties solve the problem of externalities?

4.

- a.
 - i. What do you mean by Production Efficiency in Pareto sense?
 - ii. It is said that any point inside the production possibility frontier is technically inefficient. WHY?
- b.
 - i. Define the term "Sustainable Forest Management".
 - ii. Discuss the reasons for Sustainable Forest Management.

5.

- a. What is meant by Exhaustible Resources?
- b.
 - i. Suppose an initial estimate of oil resources (S_0) is 600 billion barrels and cumulative use of oil through the beginning of period t (U_{t-1}) is 300 billion barrels. If current annual use of oil is 3 billion barrels, calculate the reserves-to-use ratio.
 - ii. If favorable discoveries of oil cause petroleum geologist to revise the initial estimate of oil resources upwards to 1000 billion barrels and current use rate remains unchanged, calculate the reserves-to-use ratio.
- c. Describe the market dynamics of exhaustible resources in two periods by taking oil as the resource and calculate the Net Social Benefit (NSB). Use the following conditions;

Case one

Unrestricted supply

Zero marginal extraction cost

Case two

Unrestricted supply

Positive marginal extraction cost

Let the constant demand for oil be $P = 10 - 0.2Q$ and discount rate is 8%:

P – Price of oil in dollars per barrel

Q – Quantity demanded in barrels