

MAJOR FIELD PRELIMINARY EXAMINATION  
RESOURCE ECONOMICS

January 18, 1979

First Day

Answer All Questions in 3 Hours

I. A perpetual lease assures that a building will rent for \$500 per month indefinitely. The annual discount rate is 10 percent. The building's assessment equals the value of the discounted income stream to the landlord. At how much would the building be assessed if:

- a. no property taxes are levied?
- b. a non-recurring special assessment of \$1000 is levied on all property owners?
- c. an ad valorem tax of 20 mills is levied annually? 6000

In case c, what are the annual:

- d. property taxes on the building?
- e. rent payments by the tenants?

II. To Mishan, the two "constitutional" value judgments are:

1. a Pareto improvement is socially desirable; and
2. a better distribution of welfare is socially desirable.
  - a. Explain why these are value judgments.
  - b. Explain how they influence the "new" welfare economics.

III. Develop the case against willingness to pay as a measure of benefits in benefit-cost analysis.

MAJOR FIELD PRELIMINARY EXAMINATION  
NATURAL RESOURCES

January 19, 1979

Second Day

Answer All Questions in 3 Hours

- I. Until recently, all fisheries models were based on the assumed goal of sustained rent maximization. The newer contributions to this literature argue that the correct goal is maximization of the present value of rents.
1. Define the term "rents" as applied to fisheries.
  2. Describe the arguments for and against maximizing the present value of rents rather than sustainable rents.
  3. How will the optimal equilibrium catch and biomass differ depending on which goal is assumed?
  4. Explore the policy implications of the debate between those who favor sustained rent maximization and those who favor present value maximization.
- II. "...a society must meet two requirements before it can stabilize: it must...have developed an integrated productive technology, but it must also have found ways of ensuring that a balance is maintained between its demand for natural resources and the environment's ability to supply them. Every society...has the potential to expand beyond the limits of its resource-base...the development of a productive system is a process of adapting to a particular ecological niche, of exploiting and processing a specific set of natural resources."

Defend or criticize this view with respect to its usefulness to an economist.

III. In what ways does the economic problem differ from the use of stock resources vis-à-vis the use of flow resources?