

Question 1 Exam set SØK1101 V22

Exam SØK1101 June 2022, 4 hours

Answer all 4 questions. Weights given next to each question.

Question 1 (25%) Externalities

- a. What is the effect of a negative production externality on economic surplus?
- b. Illustrate and discuss how assigning property rights can, in principle, solve problems related to negative production externalities. What are some of the difficulties in practice in doing this?

Question 2 (25%) Pollution Abatement

- a. Imagine there are two polluting firms with different marginal costs of pollution abatement. Suppose the government wants to reduce overall pollution, how should this pollution reduction be shared across these firms?
- b. Compare taxation-based approaches to cap-and-trade approaches to achieving this reduction.

Question 3 (25%) Depletable Resources

- a. What do we mean by **economic** reserves of a depletable resource and why is this distinction between economic and geological reserves important?
- b. Demonstrate using a 2-period depletable resource model how a positive discount rate leads to more of the resource being used in the first period, while both price and marginal user costs rises over time.

Question 4 (25%) Topics

- a. In natural resource settings such as fisheries, demonstrate and discuss what is meant by maximum sustainable yield and what this is different to the economic concept of efficient sustainable yield?
- b. Why do (for example) oil providing nations seek to form cartels and collude on price?