

Last Name: _____

First Name: _____

Immatriculation No.: _____

Place No.: _____

BERGISCHE UNIVERSITÄT WUPPERTAL
Fachbereich Wirtschaftswissenschaft

Klausuraufgaben

International Environmental Economics
and International Policy Issues

Alle Studienrichtungen

Prüfer / Examiner:
Prof. Dr. P.J.J. Welfens

Prüfungstag / Date:
25.09.2015

Erlaubte Hilfsmittel / Allowed tools:
Keine / None

Alle Aussagen sind zu begründen und Rechenschritte, so fern notwendig vollständig wiederzugeben.

Abweichungen führen zu Abzügen bei der Punktzahl.

Bei Unklarheiten im Verständnis der Aufgaben ist anzugeben unter welche Annahmen die Aufgaben bearbeitet wurden.

Die Klausur gilt als bestanden, wenn die erreichte Punktzahl mindestens 45 Punkte beträgt.

All arguments are to be justified and all steps of any calculation should be stated.

Deviations might lead to a deduction of points.

If unclear on how to answer a question, name the assumptions under which the question has been answered.

The exam is passed if the overall amount of points is at least 45.

Unterschrift / Signature

Die Klausur besteht aus insgesamt 3 (drei) Seiten. / The exam consists of 3 (three) pages.

Part I - Udalov

Question 1 (5 Points)

Decompose CO₂ emissions using the formula from the lecture. Describe possible developments of respective components. According to the formula, what are the possible measures to decrease CO₂ emissions?

Question 2 (15 Points)

Electricity production causes environmental damages of which the associated costs are not borne by the producer or consumer of that electricity. These damages are represented by the following marginal external costs: $MEC(x) = x/30$. It is assumed that the electricity producer has no fix costs and faces only marginal costs of $1/15$ Euro for producing one MWh of electricity. The demand function for electricity is equal to $D(x) = 50 - x/15$.

- a) Calculate the uncorrected electricity market equilibrium.
- b) What is the corrected market equilibrium?
- c) In order to internalize the negative external effect, the regulator decides to introduce the Pigou tax. What are the optimal amount of the tax and the corresponding tax revenue?

Question 3 (10 Points)

Discuss the criticism of the Pigou tax. Evaluate the Pigou tax using criteria for the assessment of standard-orientated instruments and compare this instrument with other standard-orientated instruments.

Part II - Wilts

Question 1 (10 Points)

Explain the key drivers for resource efficiency. How do they relate to observable changes in environmental problems?

Question 2 (10 Points)

What are relevant strengths and weaknesses of market-based instruments for resource efficiency?

Question 3 (10 Points)

Taking the example of either natural resource extraction taxes or waste incineration taxes: How could these instruments increase resource efficiency and what are relevant barriers for their implementation?

Part III - Erdem

Question 1 (8 Points)

Please answer the following questions.

- a) (3 Points) Please describe shortly 3 specifics setting energy markets apart from regular markets.
- b) (5 Points) Please explain the 3 main objectives of energy policy and describe the trade-offs between those.

Question 2 (10 Points)

Why are the energy networks in Germany regulated? Please explain the regulatory objectives and options of the national regulatory agencies

Question 3 (12 Points)

Please explain the 3 of 5 concepts you choose: (4 Points each)

- a) Components of energy prices
- b) Eco-economic decoupling
- c) Merit-order effect
- d) Dutch disease
- e) Carbon lock-in effect