



**Stockholm
University**

Department of Economics

Course name: Public Finance
Course code: EC2106
Type of exam: Main
Examiner: Mikael Priks
Number of credits: 7,5 credits
Date of exam: Friday January 11th, 2019
Examination time: 09:00-12:00 (3 hours)
Aids: No aids are allowed.

Write your identification number on each answer sheet (the number stated in the upper right hand corner on your exam cover).

Start each new question on a new answer sheet.

Explain notions/concepts and symbols. If you think that a question is vaguely formulated, specify the conditions used for solving it. Only legible exams will be marked.

The exam consists of 3 questions worth 100 points in total. For the grade E 45 points are required, for D 50 points, C 60 points, B 75 points and A 90 points.

Your results will be made available on your Ladok account (www.student.ladok.se) within 15 working days from the date of the examination.

Good luck!

Exam, Public Finance, 01-11-2019

Mikael Priks

This exam consists of three questions. The first and second question give 40 credits each and the last question gives 20 credits. p denotes prices and q quantities. To get full credit, you need to state and explain your results clearly. Good luck!

Externalities (40)

- Define a negative production externality.
- Why do markets not always manage to solve the problem of externalities on their own?
- Under which conditions does smoking lead to externalities in terms of health care costs and workplace productivity? What type of externality is smoking?
- Assume that the marginal cost curve for honey producers is given by $p=q$. The demand for honey is given by $p=20-q$. The production of honey also affects the neighboring apple producers positively but the honey producers do not incorporate this in the production decisions. This externality is equal to eq per produced unit. Show in a figure and derive the welfare loss that occurs. What can the government do to solve the problem? Show in the figure and explain. What would the effects of the intervention be for the government budget?

Insurance (40)

- What does adverse selection mean? Give an example.
- How does an optimal health insurance on large unpredictable events differ from one based on small and more predictable events? Explain.
- Assume that the demand for going to hospitals is given by $p=10-2q$ and the society's marginal cost curve is given by $p=2q$. The individuals are insured and do not have to pay anything for the visits. Derive and show the number of visits to hospitals by the individuals and the welfare loss in a figure. Explain.
- Assume that an individual has the following relationship between income and utility.

Income	Utility
30,000	40
40,000	180
50,000	250
60,000	280
70,000	300

The individual has the income 70,000. With probability 0,5 an accident occurs and she has to pay 40,000. With probability 0,5 the accident does not occur and she keeps 70,000. She can also buy a full insurance. Assume that the price of the insurance is fair. Will the individual buy the insurance? Explain. Is it possible that she wants to pay more than the fair premium? If so, how much?

Taxation (20)

- a) State the three rules of tax incidence.
- b) Explain the intuition behind the shape of the Laffer curve.