

STOCKHOLM UNIVERSITY  
Department of Economics

**Course name:** Public Finance  
**Course code:** EC2106  
**Examiner:** Mikael Priks  
**Number of credits:** 7,5 credits  
**Date of exam:** 24 February 2018  
**Examination time:** 9.00-12.00 (3 hours)

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

Explain notions/concepts and symbols. Only legible exams will be marked. No aids are allowed.

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The exam consists of 3 questions. The first and second questions give 40 points each and the last question gives 20 points, 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.

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If you think that a question is vaguely formulated: specify the conditions used for solving it.

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Results will be posted on [www.student.ladok.se](http://www.student.ladok.se) 16 March the latest.

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**Good luck!**

## Exam, Public Finance

Mikael Priks

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

### Theoretical Tools of Public Finance (40)

- a) Define the marginal rate of substitution. Use a figure to explain the concept.
- b) State the first fundamental welfare theorem of economics.
- c) What is the difference between a utilitarian welfare function and a Rawlsian welfare function?
- d) Assume that an individual's utility function is given by  $u = \sqrt{xy}$  and that her budget constraint is  $1600 = 200x + 400y$ . Set up the Lagrangian and solve for the optimal consumption bundle of  $x$  and  $y$ .

### Taxation (40)

- a) Discuss the difference between statutory incidence and economic incidence.
- b) Assume that the demand curve is given by  $p = 20 - q$  and the supply curve is given by  $p = q$ . Show in a figure how the producer burden and consumer burden are affected by a tax equal to 5 per unit levied on the producers. Explain.
- c) Assume that the demand curve for a good is given by  $p = 8 - q$  and the supply curve is given by  $p = q$ . The government considers imposing a tax on the consumers equal to  $t$  for each unit. Derive and show in a figure the produced quantity with and without the tax and the government's tax incomes. How are the tax incomes affected by an increase in the tax rate? Explain.
- d) Consider a situation when the producer is a monopolist. Assume that the market demand is  $p = 20 - q$ , the monopolist's marginal cost is equal to zero and the government imposes a unit tax on the producer equal to 10. How is the price level affected by this tax? Derive and show in a figure how the welfare loss is affected. Explain.

### **Political Economics (20)**

- a) State the median voter theorem. Mention one empirical paper that has tested the median voter model.
- b) What is the difference between Niskanen's theory of corruption and the Leviathan theory of corruption?