Stockholm University

Department of Economics

Course name:	**Labour Market Economics**
Course code:	**EC2102**
Type of exam:	**Retake**
Examiners:	**Ann-Sofie Kolm and David Seim**
Number of credits:	**7,5 credits**
Date of exam:	**Saturday, 13 February, 2016**
Examination time:	**3 hours (9:00-12:00)**

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

Use one cover sheet per question. 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. **No aids are allowed.**

The exam consists of 6 questions. The questions are worth 100 points in total. For the grade E 40 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 "My Studies" account **(**www.mitt.su.se) on March 4 at the latest.

Good luck!

Q1. (20 points) Use the static model of individual labour supply and discuss how labour supply on the intensive margin (hour decision) and the extensive margin (participation decision) is determined. Why do some workers choose to supply more work hours than others, and why do some workers choose to participate in the labour force whereas others don't? Then show how these margins can be affected by a proportional income tax. Also, provide a discussion of how another decisions, namely the educational decision can be affected by a proportional income tax.

Q2. (20 points) Consider a profit maximizing firm producing a product by use of capital and labour. Although the firm can use both capital and labour as inputs, and it is fairly easy to substitute between these inputs, the firm relies heavily on labour when producing the output. There are no similar products on the market. Discuss which factors facing this firm are likely to make its demand for labour more/less sensitive to wage changes. Motivate your answer.

Q3. (20 points) Provide a short description of the following three equilibrium rate of unemployment models: the Monopoly union model, the Search and matching model, and the Shirking model.

Q4. (10 points). Define the Gini-coefficient that is used to measure inequality of income and earnings. Use a graph to illustrate how the Gini-coefficient is constructed.

Q5. (10 points) Human capital theory and signaling theory are two competing theories that can explain the observed relationship between wages and schooling. How can both these theories explain the observed relationship?

Q6. (20 points) Consider a case where the demand side on the labour market is represented by the following demand function: $N = w^{-\frac{1}{(1-\alpha)}}$, where w is the wage, N is the number of employed workers, and α <1 is a positive technology parameter. In accordance with the monopoly union model a wage setting curve (*WS*) can be derived and given by:

$N = k\left(1 - \frac{1-\alpha}{1-\frac{B}{w}}\right)$, where k is a positive constant, and B is unemployment insurance.

a) Draw the wage setting curve (WS) and the labour demand curve (*LD*) in a figure with employment (*N*) on the *X*-axes and the wage (*w*) on the *Y*-axes. (7)
b) Use the equations for the labour demand and the wage setting and its corresponding figure to show how employment and the wage change when *B* increases. (7)
c) Carefully motivate your answer in *b*). (6)