Stockholm University

Department of Economics

Course name:	**Labour Market Economics**
Course code:	**EC2102**
Semester:	**SPRING 2015**
Type of exam:	**Main**
Examiners:	**Ann-Sofie Kolm and David Seim**
Number of credits:	**7,5 credits (hp)**
Date of exam:	**Friday, May 29, 2015**
Examination time:	**3 hours (09-12)**

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 with 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 June 18 at the latest.

Good luck!

Q1. (20 points) Consider the US policy of the Earned Income Tax Credit (EITC).

(i) Provide a short description of how the EITC in the US is constructed. What are the main features of the policy? (4)
(ii) Use the basic static model of individual labour supply and show how the budget line looks prior to the EITC, as well as how it looks ex post. (6)
(iii) Use the basic static model of individual labour supply and explain how the EITC is likely to affect labour force participation. Motivate your answer. (5)
(iv) Depart from one of the models of the equilibrium rate of unemployment (Monopoly union model, RTM, Matching model, or Efficiency wage model) and discuss how wages are likely to be affected by the EITC. Motivate your answer. (5)

Q2. (20 points) After a negative shock to unemployment, it may take a long time for unemployment to return to its original equilibrium rate. This is referred to as persistence in unemployment.

(i) Provide the most common arguments for why there may be persistence in unemployment. (5)
(ii) Discuss how unemployment may only slowly return to its original level after a negative shock if there is a social norm to support oneself. (5)
(iii) Explain why we can have a situation with multiple unemployment equilibria in the presence of a social norm to support oneself. How can these unemployment equilibria be sustained? (5)
(iv) What do we know empirically from studies investigating if a person is more or less likely to escape unemployment for a job if he/she is surrounded by unemployed friends. (5)

Q3. (10 points) Assume a profit maximizing firm with a production technology represented by a Cobb-Douglas production function $Y = N^{\frac{1}{3}}$. Y is production, and N is the number of employed workers. Derive the profit maximizing firm's demand for labour (LD).

Q4. (14 points) Consider a worker who chooses between a risky job and a safe job. Let x denote riskiness of the job and x=2 if the job is risky and x=0 if it is safe. Suppose utility is given by $U=u(w,x)=w - x^2$.

(v) What is the compensating wage differential? (10)

(vi) Does the compensating wage differential differ depending on the wage in the safe job? (4)

Q5. (18 points) Consider a government that contemplates extending the mandatory school system from nine years to ten years in primary school. You are now asked to give recommendation about the implementation and are thinking about estimating the model:

$$Y_i = b_0 + b_1\, sch_i + e_i$$

Where Y_i is the outcome (e.g. wage) of individual i, and sch_i is the years in school of the same individual. e_i is an error term.

(i) Explain the problems associated with estimating this model using observational survey data, such as LNU (used in class). (6)
(ii) If you had no financial restrictions or ethical considerations, explain how you would uncover b_1? (6)
(iii) Explain the research design that Meghir and Palme (2005) use in their paper to estimate b_1? (6)

Q6. (18 points) Suppose that you are deciding whether to move to the US or stay in Sweden. Let us make the simplifying assumption that you only live in two periods: today and tomorrow. You earn a wage of W_{US} in the US and W_{SW} in Sweden and they are constant over time. If you decide to move, you incur a cost of M.

(i) Let the interest rate be given by r. State the condition under which you will move. (6)
(ii) Using this model, explain how the US government could attract foreign workers through policies that change r, W_{US} or M. (6)
(iii) Suppose that $r=0$ and that the wage in the US is twice as large as that in Sweden. Interpret the condition under which you will move. (6)