



Department of Economics

Course name: Intermediate Macroeconomics
Course code: EC2201
Examiner: Lars Calmfors
Number of credits: 7,5 credits
Date of exam: 7 December 2013
Examination time: 5 hours [9.00-14.00]

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 5 tasks. Tasks 1 and 3 are worth 20 points each, tasks 2 and 4 are worth 25 points each and task 5 is worth 10 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.

Only students who have NOT received a course credit from the seminar exercises should do task 5. Students who have received a course credit should not do task 5 (and cannot get any extra points from doing it).

Your results will be made available on your “My Studies” account (www.mitt.su.se), on Friday 20 December at the latest.

Good luck!

Task 1 (Maximum 20 points)

Give short answers (maximum two pages per question).

- (a) Assume that a country has a fixed exchange rate. Assume that agents in the foreign currency market start to expect a devaluation. How must the central bank respond if it is to hold the exchange rate fixed? Explain why this may be difficult to do. (Maximum 5 points)
- (b) Characterise the steady state in the version of the Solow model with population growth but no technological progress. Explain how the golden-rule level of the capital stock, i.e. the level which maximises per capita consumption in the steady state, is determined. How can a government see to it that this level is reached? (Maximum 5 points)
- (c) Derive a formula for how the money supply in an economy depends on the monetary base, the banks' reserve-deposit ratio and the public's currency-deposit ratio. (Maximum 5 points)
- (d) Explain what is meant by the Fisher effect. Derive it by combining the equations for interest rate parity and purchasing power parity (PPP). (Maximum 5 points).

Task 2 (Maximum 25 points).

Use Irving Fisher's two-period model for consumption.

- (a) Derive mathematically the household's intertemporal budget constraint and draw it in a diagram. (Maximum 10 points)
- (b) Analyse how consumption in the two periods is affected by a fall in expected period 2-income. How is saving in period 1 affected? (Maximum 5 points)
- (c) Analyse how consumption in the two periods is affected by an increase in the real interest rate. (Maximum 5 points)
- (d) How does the intertemporal budget constraint in (a) change if there is a borrowing constraint for the household? How does such a constraint change the analysis in (b)? (Maximum 5 points)

Task 3 (Maximum 20 points)

Use the AA-DD-model in Krugman-Obstfeld-Melitz to answer the following questions.

- (a) Assume that there is a temporary fall in foreign income which reduces export demand. Explain how the exchange rate, output, and the interest rate are affected. (Maximum 5 points)
- (b) Explain how the government can stabilise output. (Maximum 4 points)
- (c) Explain how the central bank can stabilise output. (Maximum 5 points)

- (d) What considerations should influence whether it is the government or the central bank that should try to stabilise the economy? (Maximum 6 points)

Task 4 (Maximum 25 points)

A number of countries in the euro area (Greece, Ireland, Portugal, Spain, Cyprus and Italy) suffer from severe government debt crises. Explain how these crises arose. Discuss how the crises are being handled. Why is it so difficult for the crisis countries to get out of the crises they find themselves in? How could real exchange rate depreciations help and how could they be achieved?

Task 5 (Maximum 10 points)

THIS TASK SHOULD BE SOLVED ONLY BY THOSE WHO DO NOT HAVE A COURSE CREDIT FROM THE SEMINAR EXERCISES. THOSE WHO HAVE A CREDIT DO NOT OBTAIN ANY POINTS FROM THIS TASK.

- (a) Write out the equation for the Taylor rule and explain it. (Maximum 5 points)
- (b) Explain how the real interest rate should adjust to a fall in inflation according to the Taylor principle. (Maximum 5 points)