Department of Economics

Course name:	**Intermediate Macroeconomics**
Course code:	**EC2201**
Examiner:	**Lars Calmfors**
Number of credits:	**7,5 credits**
Date of exam:	**26 October 2014**
Examination time:	**15.00- 20.00**

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 14 November at the latest.

Good luck!

Question 1 (Maximum 20 points)

Give short answers (maximum two pages per question).

(a) The Mankiw and Krugman-Obstfeld-Melitz textbooks both use the concept *real exchange rate* but define it slightly differently. Give the definitions used in the two books and explain in what directions the real exchange rate changes according to the two definitions when there is a real depreciation. In principle such a real depreciation can be achieved in three ways. Explain which they are and how easily they can be used. (Maximum 5 points)

(b) Characterise the steady state in the version of the Solow model with population growth but without technological progress. Explain why the economy converges to such a steady state. (Maximum 5 points)

(c) Real-wage rigidity, i.e. that the real wage is higher than the level consistent with equality between labour supply and labour demand, may be a cause of unemployment. Discuss what factors could explain such real-wage rigidity. (Maximum 5 points)

(d) Write down the interest rate parity condition. Assume that the exchange rate is fixed and credible. What does the interest rate parity condition then imply? Then assume that agents in the foreign exchange market start to expect a 10 per cent devaluation of the currency taking place one year from now. What does this imply for monetary policy if the fixed exchange rate is to be maintained? (Maximum 5 points)

Question 2 (Maximum 25 points)

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

(a) Assume first that there is a *temporary* fall in the money supply. How are the nominal and real exchange rates, output, the price level and the interest rate affected in the short run? (Maximum 6 points)

(b) How are the nominal and real exchange rates, output, the price level and the interest rate affected in the long run by a temporary fall in the money supply? (Maximum 4 points)

(c) Assume now that there is a *permanent* fall in the money supply? How are the nominal and real exchange rates, output, the price level and the interest rate affected in the short run? How does the short-run equilibrium in this case differ from the one in (a)? (Maximum 5 points)

(d) How are the nominal and real exchange rates, output, the price level and the interest rate affected in the long run by a permanent fall in the money supply? (Maximum 5 points)

Question 3 (Maximum 25 points)

This question is about the DAS-DAD model in Mankiw.

   (a) Write down and explain the five equations in the model: for aggregate demand, for the real rate of interest, for aggregate supply (the Phillips curve), for expected inflation and for monetary policy (the Taylor rule). (Maximum 5 points)

   (b) Explain which variables are exogenous or predetermined and which variables are endogenous. (Maximum 5 points)

   (c) Define and characterise the long-run equilibrium (steady state) of the model. What values will the endogenous variables then take on? (Maximum 10 points)

   (d) What does the Taylor rule imply for the relationship between the real interest rate and inflation? Explain why this relationship is crucial for the stability of the economy. (Maximum 5 points)

Question 4 (Maximum 20 points)

Fiscal councils have recently been established as fiscal watchdogs in many countries. Discuss why it may be important to have such institutions and what role they could play. Are they likely to be able to fulfil their roles.

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.

The money supply is determined by the behaviour of the central bank, the banking system and depositors. Derive an equation showing how the money supply depends on the monetary base, the reserve-deposit ratio and the currency-deposit ratio.