Queen Mary
University of London

B.Sc. (Econ) by course unit

9 May 2012, 10:00 a.m.

ECN 106 Macroeconomics 1 Duration: 2 hours

YOU ARE NOT PERMITTED TO START READING THE CONTENTS OF THIS QUESTION PAPER UNTIL INSTRUCTED TO DO SO BY AN INVIGILATOR.

Answer ALL questions from Section A and ONE question from Section B.

CALCULATORS ARE PERMITTED IN THIS EXAMINATION. PLEASE STATE ON YOUR ANSWER BOOK THE NAME AND TYPE OF MACHINE USED.

COMPLETE ALL ROUGH WORKINGS IN THE ANSWER BOOK AND CROSS THROUGH ANY WORK THAT IS NOT TO BE ASSESSED.

IMPORTANT NOTE: THE *ACADEMIC REGULATIONS* STATE THAT POSSESSION OF UNAUTHORISED MATERIAL AT ANY TIME WHEN A STUDENT IS UNDER EXAMINATION CONDITIONS IS AN ASSESSMENT OFFENCE AND CAN LEAD TO EXPULSION FROM QMUL.

PLEASE CHECK NOW TO ENSURE YOU DO NOT HAVE ANY NOTES, MOBILE PHONES OR UNAUTHORISED ELECTRONIC DEVICES ON YOUR PERSON. IF YOU HAVE ANY THEN PLEASE RAISE YOUR HAND AND GIVE THEM TO AN INVIGILATOR IMMEDIATELY. PLEASE BE AWARE THAT IF YOU ARE FOUND TO HAVE HIDDEN UNAUTHORISED MATERIAL ELSEWHERE, INCLUDING TOILETS AND CLOAKROOMS IT WILL BE TREATED AS BEING FOUND IN YOUR POSSESSION. UNAUTHORISED MATERIAL FOUND ON YOUR MOBILE PHONE OR OTHER ELECTRONIC DEVICE WILL BE CONSIDERED THE SAME AS BEING IN POSSESSION OF PAPER NOTES. MOBILE PHONES CAUSING A DISRUPTION IS ALSO AN ASSESSMENT OFFENCE.

EXAM PAPERS CANNOT BE REMOVED FROM THE EXAM ROOM.

Examiner: Dr. Giulio Fella

Section A

1. [**40 marks**] The consumption and investment functions are given by

$$C = 100 + 0.7(Y - \bar{T}) \tag{1}$$
$$I = 230 - 1000r \tag{2}$$

where Y is output and r the real interest rate. Government expenditure and taxes are equal respectively to $\bar{G} = 100$ and $\bar{T} = 100$. The LM curve is given by

$$\frac{\bar{M}}{P} = Y(1 - r - \bar{\pi}^e) \tag{3}$$

where P is the price level, $\bar{M} = 1100$ the nominal money supply and $\bar{\pi}^e = 0.02$ the expected rate of inflation. The economy is initially in equilibrium with output at its long-run equilibrium level $\bar{Y} = 1100$.

Because of an increase in business confidence, investment increases to

$$I = 250 - 1000r. \tag{4}$$

a) Derive both graphically and numerically the long-run equilibrium values of output, the real interest rate, investment and the price level before and after the shock. [**25 marks**]

b) Suppose that in the short run the price level is fixed at its original, long-run equilibrium level. Graphically derive the effects of the shock on equilibrium output, the real interest rate, investment and the price level in the short run. [**15 marks**]

2. [**40 marks**] State whether the statements below are true or false and give a brief (no more than half a page for each item) explanation in support of your answers.

a) The money supply multiplier falls if people want to hold more bank deposits and less currency. [**10 marks**]

b) In the long run an increase in government expenditure always results in higher national saving. [**10 marks**]

c) A liquidity trap is a situation in which agents are indifferent between holding money and bonds. [**10 marks**]

d) Fiscal policy cannot stabilize output if the demand for money is independent of the interest rate. [**10 marks**]

Section B

3. The nominal and real interest rates are linked by the Fisher equation $i = r + \bar{\pi}^e$, where i is the nominal interest rate, r the real interest rate and $\bar{\pi}^e$ the expected rate of inflation. Explain the economic intuition behind the Fisher equation. Derive the effect of an increase in the expected rate of inflation $\bar{\pi}^e$ on the equilibrium values of output, the real and nominal interest rates and the price level in the short and the long run. [**20 marks**]

4. Discuss the most likely causes of the current "Great Contraction" and why stabilizing the economy has proved so difficult. Graphically analyze possible policies aimed at bringing aggregate output back to its long-run equilibrium and discuss their potential benefits and shortcomings. [**20 marks**]

End of paper