

Macroeconomics
Final Examination
Summer Semester 2009

Time allowed: 1 hour 30 minutes

Answer **ALL** of the following questions.

Question 1 (30 Marks)

Discuss **three** of the following:

- a) NAIRU
- b) The Marshall-Lerner condition and the J-curve
- c) Nominal and real exchange rates
- d) Price determination

Question 2 (15 Marks)

We consider a closed economy whose behaviour is described by the following system:

$$\begin{cases} P = (1 + \mu) \frac{W}{A} \\ W = P^e F(u, z) \\ Y = AN \end{cases}$$

with $F(u, z) = 1 - u + z$ and where A stands for the technological progress. It means that the production cost of the firm is $\frac{W}{A}$.

- a) Determine the aggregate supply relation. **(3 Marks)**
- b) Determine the wage setting relation and the price setting relation. **(4 Marks)**
- c) Determine the expression of the natural unemployment rate u_n and the expression of the natural output Y_n . **(2 Marks)**

Assume initially the closed economy is in medium-run equilibrium. Output is at its natural level Y_n and prices are at a level P_0 . Assume there is an increase in technological progress A .

- d) Describe in economic words the effects of an increase in A on the natural unemployment rate? Illustrate it by using a WS-PS diagram (hint: determine if it is the wage setting or the price setting relation which will be affected by the increase in A). **(5 Marks)**
- e) What is the impact of an increase in A on the natural level of output? **(1 Mark)**

Question 3 (15 Marks)

Using the AS-AD and the IS-LM diagrams, illustrate and explain the short-run and medium-run effects of a lower markup. In your graph, illustrate the equilibrium for the first two periods in addition to the

medium-run equilibrium. Also describe and explain what happens to P , Y , i , I and u . Assume initially that the economy is at the natural rate of output.

(NOTE: Graphs without explanations, particularly explanations of any shifts in the curves, will receive no points)