EC2010 Intermediate Economics
Macroeconomics Module
Michaelmas Term 2007

PROBLEM SET 7

All problems will be discussed in tutorials in week 9.

Problem 1

This exercise reviews the derivation of the expectations-augmented Phillips curve from the aggregate supply curve. The aggregate supply curve is given by

$$P = P^e(1+\mu)F(u,z)$$

(a) Assuming that $F(u,z) = 1 - \alpha u + z$, show that the aggregate supply curve can be rewritten as

$$(1+\pi_t) = (1+\pi_t^e)(1+\mu)(1-\alpha u_t + z)$$

(b) Using an approximation, show that the previous equations can be rewritten as

$$\pi_t = \pi_t^e + (\mu + z) - \alpha u_t$$

Problem 2

This exercise reviews the derivation of the aggregate demand curve in terms of growth rates of output and nominal money, and inflation. The standard aggregate demand curve is given by

$$Y_t = \gamma \frac{M_t}{P_t}$$

(a) What is the economic interpretation of the aggregate demand function?

(b) Using logarithms and differentiation, show that the aggregate demand curve can be rewritten in terms of growth rates as

$$g_{yt} = g_{mt} - \pi_t$$