ECO402: Intermediate Macroeconomics

Homework 7

Covers Chapter 9

Due: Saturday June 4, 2020 at 5:00pm

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Instructions: Please upload an answer document on Canvas by the due date above, preferably a PDF document or clear pictures of your handwritten assignment. For handwritten submissions, you are not required to print out the questions to submit the answers. You can just use a separate piece of paper.

Total Points: 12

1. In the IS-LM-PC model, which of the following is assumed to be exogenous?

   (a) G

   (b) C

   (c) I

   (d) Y

2. If the output is too high, to achieve the medium run equilibrium, the central bank will

   (a) increases policy rate.

   (b) reduces policy rate.

   (c) increase money supply.

   (d) increases inflation rate.

3. The zero lower bound refers to the situation that

   (a) the lowest the central bank can decrease the nominal policy rate is 0%.

   (b) real interest rate is 0

   (c) inflation rate is 0

   (d) risk premium is 0

4. As fiscal consolidation takes place, the central bank should

   (a) decrease the policy rate.

   (b) increase the policy rate.

   (c) increase inflation rate.

   (d) decrease money supply.

5. Consider the following IS-LM PC model:

$$C = 100 + .5(Y - T)$$

$$I = 100 + .25Y - 1000(r + x)$$

$$G = 200$$

$$T = 200$$

$$i = .05$$

$$r = i - \pi^e$$

$$x = .03$$

$$\pi - \pi^e = .00025(Y - Y_n)$$

(a) Suppose that $r_n = .03$ and inflation expectations are anchored at .02. Using this information find the natural level of output.

(b) Suppose that the government chooses to increase spending to 300. First find the new natural rate of interest. Find this by setting $Y = Y_n$ in the IS relation with G=300.

(c) Assuming the nominal interest rate is unchanged find the effect on output and inflation.

(d) What must the nominal interest rate be set to in order to return to the natural level of output?

(e) If the increase in government spending is permanent, what will likely happen to inflation expectations?

6. The current Coronavirus outbreak can be thought of as both a demand-side shock (consumers are spending less due to uncertainty and fear of contracting the disease) and a supply side shock (certain supply-lines have been disrupted, delaying and or increasing production costs). Assume we are initially at Y_n.

   (a) First graph the effect of this shock in the IS-LM-PC model for the case where the drop in demand is larger than the drop in the natural level of output. (Show both the IS-LM and the PC graphs)

   (b) If policy makers try to return output to its old natural level, what will happen? Are the consequences of this action better if the supply shock is temporary vs permanent?

   (c) Suppose in the long-run the virus leads to a shift towards remote work which makes labor markets more flexible. What happens to the natural level of output?