SIMON FRASER UNIVERSITY

Department of Economics

Econ 305   Prof. Kasa

Intermediate Macroeconomic Theory   Spring 2011

FINAL EXAM

(Solutions)

Answer the following questions True, False, or Uncertain. Briefly explain your answers. No credit without explanation. (8 points each).

1. A problem with market-clearing business cycle models is that they predict money and output are uncorrelated.

   FALSE/UNCERTAIN. *Market-clearing models predict that changes in money do not lead to changes in output. However, they do not rule out causation running the opposite direction. If the central bank wants to target the price level, then higher output, which increases money demand, will require the central bank to increase the money supply. In the data, we see money and output being positively correlated, but in this case it is output changes causing money changes.*

2. According to Milton Friedman, the optimal rate of inflation is zero.

   FALSE/UNCERTAIN. *According to Friedman, the nominal interest rate should be zero. By the Fisher equation, the implies a negative inflation rate (ie, deflation) as long as the real interest rate is positive.*

3. A problem with Keynesian business cycle models is that they predict real wages are counter-cyclical.

   UNCERTAIN. *This is true of early versions of Keynesian models, which assumed nominal wages are temporarily fixed and employment is demand determined. In these models, a higher price level translates into lower real wages, which then increases labor demand, employment, and output. As a result, the Aggregate Supply curve slopes up, and demand-driven business cycles should produce counter-cyclical real wages. However, more modern versions of Keynesian models attribute nominal rigidities to slowly adjusting goods prices, and assume that employment is constrained by the labor supply curve. Firms hire whatever labor is required to produce the output that is demanded at the current price. If output demand increases, firms hire more labor, which bids up wages as you move up along the labor supply curve. In this case, real wages rise as output increases (ie, real wage are procyclical).*

4. According to the Mundell-Fleming model, fiscal policy is relatively ineffective at stabilizing output.

   UNCERTAIN. *This is true if exchange rates are flexible. It is false if exchange rates are fixed.*

5. Legislation that made it more difficult for firms to fire workers would decrease the unemployment rate.

   UNCERTAIN. *It would reduce the job separation rate, which tends to reduce unemployment. However, it would also reduce the job finding rate, since firms would be more reluctant to hire workers in the first place. The net effect could go either way. I also briefly discussed how the more formal search model in chpt 16 could be used to address this question. There, the increase in s causes the $s(1-u)$ line to rotate up and to the right. However, it also causes the reservation wage to fall (why wait for a high paying job if you're likely to lose it?). This rotates the pUH line to the left. Again, the net effect is ambiguous.*

   The following questions are short answer. Briefly explain your answer. Clarity will be rewarded.

6. (20 points). There has been much recent discussion in the U.S. about reducing the government budget deficit. Suppose that in fact the U.S. does reduce its deficit, by some combination of higher taxes and lower spending. According to the Mundell-Fleming model, what would be the consequences for Canada? Illustrate your answer with a graph. (Hint: Canada has a flexible exchange rate against the U.S. dollar).

   A U.S. fiscal contraction would tend to produce lower output in Canada as well. The U.S. IS curve shifts left, U.S. interest rates fall, the U.S. dollar depreciates, and therefore Canadian net exports decline. This shifts Canada's IS curve left also. (See the slides for Lecture 18 (extended version) *(page 22) for the graph).*

7. (20 points). As discussed throughout the course, there is much debate among economists about classical versus Keynesian business cycle models. It would be nice to be able to distinguish between them. Some people have argued that we can do this by looking at how employment responds to productivity shocks. Explain why this is. Compare and contrast what each model predicts about how employment responds to productivity shocks. If possible, use graphs to illustrate your answer.

   Keynesian models predict that positive productivity shocks cause employment to fall. *Since output is demand determined in these models, and since productivity makes each worker capable of producing more output, the firm responds by hiring* fewer *workers (or requiring each worker to work fewer hours). (See pages 430-432 in the textbook for a more detailed discussion). In contrast, market-clearing models predict that positive productivity shocks cause employment (or more accurately, hours) to rise. (See page 2 from the slides for* Lecture 14 (extras) *for the graphs.)*

8. (20 points). The word 'stagflation' is sometimes used to describe the combination of rising inflation and falling output. Explain why the stagflation of the mid-1970s was a problem for the existing Keynesian models of the time. In contrast, explain why stagflation is to be expected according to classical, market-clearing, models of the business cycle. If possible, use graphs to illustrate your answer.

   Traditional Keynesian models attributed business cycles to AD shocks. With a positively sloped AS curve, this implied that output and inflation should be positively *correlated (ie, the Phillips Curve). Hence, stagflation episodes were problematic. In contrast, classical models attribute fluctuations to productivity shocks. In the AD/AS framework, this is described by shifts in a vertical AS curve. Combined with a downward sloping AD curve, you get the prediction that output and the price level should be* negatively *correlated (ie, stagflation). Alternatively, see page 363 in the textbook for the graphs.*