

PRACTICE Final Exam

This exam is 90 minutes long, and is worth 90 points. You are given 97 minutes to complete it. Part I is multiple choice, Part II is a short answer, Part III is an interpretation. The points are allocated in proportion to the time you should spend on each problem.

PART I: Multiple Choice [50 minutes total, 2.5 points each]. Do NOT explain. (20 problems)

1. Assume a Classical economy. You would expect contractionary monetary policy to

- a) leave real GDP unchanged even as prices rise.
- b) decrease real GDP despite constant prices.
- c) decrease the price level and real GDP at the same time.
- d) decrease the price level.
- e) none of the above.

2. Markup pricing

- a) constitutes irrational behavior.
- b) is inconsistent with monopolistic competition.
- c) implies that increased costs are passed on immediately.
- d) implies that prices do not respond very much to demand conditions.
- e) c and d above.

3. Factors which influence the π_t^e term in the Phillips Curve equation

$$\pi_t = \pi_t^e + f\hat{Y}_{t-1} + Z_t$$

include

- a) forward-looking forecasts.
- b) inflationary inertia owing to staggered contract settlements.
- c) inflationary inertia owing to backward-looking wage behavior.
- d) all of the above.
- e) none of the above.

4. Monetary policy is more effective in the open economy when

- a) price adjustment is very rapid.
- b) the exchange rate sensitivity of net exports is high.
- c) purchasing power parity *always* holds.
- d) the interest sensitivity of the real exchange rate is high.
- e) b and d.

5. Which of the following characterizes the Lucas supply-curve model?

- a) People are *always* exactly correct about their guesses of future values of variables.
- b) A positive relationship between the expected relative supply price and quantity in individual firms' supply curves.
- c) People ignore past information and correlations, since only the future matters.
- d) a and b above.
- e) None of the above is accurate.

6. A increase in the US-foreign interest rate differential should produce
- a) an immediate appreciation and then subsequent depreciation of the dollar.
 - b) an increase in worldwide rates, which in turn decreases worldwide demand for the dollar; the exchange rate, the price of the dollar, therefore falls.
 - c) inflation in the US and a corresponding instantaneous depreciation in the value of the dollar.
 - d) any of the above, depending on the circumstance.
 - e) none of the above.

7. *Portfolio* crowding-out of investment, and hence of income:

- a) possibly makes reduced government spending *expansionary*.
- b) is caused by higher interest rates due to the increased supply of government bonds associated with a budget deficit.
- c) is caused by the increased transactions demand for money associated with higher levels of GDP.
- d) a and b above.
- e) none of the above.

8. Real business cycle theory implies

- a) use of contractionary fiscal policy to offset inflationary booms.
- b) use of contractionary monetary policy to offset inflationary booms
- c) assumes that GDP fluctuations are driven by primarily by technology and preference shocks.
- d) a and c
- e) none of the above.

9. Which of the following characterizes the rational expectations-flexible price world?

- a) People are always exactly correct about their guesses of future values of variables.
- b) Unemployment will deviate from the natural rate by a random amount.
- c) People ignore past information and correlations, since only the future matters.
- d) a and b above.
- e) None of the above is accurate.

10. When a contractionary monetary policy causes an increase in the US-foreign interest rate differential, then the following should occur:

- a) an immediate appreciation and then subsequent depreciation of the dollar.
- b) an increase in worldwide rates, which in turn decreases worldwide demand for the dollar; the exchange rate, the price of the dollar, therefore falls.
- c) inflation in the US and a corresponding instantaneous depreciation in the value of the dollar.
- d) any of the above, depending on the circumstance.
- e) none of the above.

11. According to the "golden rule" level of capital accumulation, economies should continue to accumulate capital until they reach the level of capital per worker:

- a) that maximizes total consumption per worker
- b) where the marginal product of capital equals the depreciation rate
- c) that maximizes total output per worker
- d) both a and b
- e) all of a, b and c

12. Transfer payments made by governments over the business cycle in the United States

- a) move procyclically with GDP because they are constructed to increase or decrease automatically as tax receipts climb or fall with GDP.
- b) move countercyclically with GDP because they are constructed to increase or decrease automatically as changes in GDP cause corresponding changes in the number of people eligible for payment.
- c) are not well correlated with changes in GDP in part because the discretionary power to enact changes in fiscal policy is diluted across too many congressional committees.
- d) vary directly with tax revenues and therefore play no role in stabilization policy.
- e) none of the above.

13. The structural deficit

- a) is the same thing as the full-employment deficit.
- b) reflects the accuracy of the notion that an economy can eliminate its deficit by growing toward full employment.
- c) removes from its definition the cyclical components of the actual deficit that swell with recession and contract with boom.
- d) is a measure of deficit spending that is not sensitive to the automatic stabilizers of fiscal policy.
- e) all of the above.

14. When a bank borrows reserves from the Federal Reserve

- a) the monetary base remains unchanged because no new reserves are created.
- b) the Fed may choose to nullify the effect on the monetary base through an open market sale.
- c) the monetary base increased as new reserves enter the banking system.
- d) both b and c.
- e) none of the above.

15. Which of the following is a financial liability of the private sector?

- a) Holdings of currency
- b) Deposits in demand and savings accounts
- c) Loans
- d) Holdings of government bonds
- e) All of the above

16. If c represents the currency deposit ratio and r the reserve requirement specified by the Fed, then the money multiplier can be expressed as

- a) $c/(c + r)$.
- b) $1/(c + r)$.
- c) $(1 + r)/(c + r)$.
- d) $(1 + c)/(c + r)$.
- e) $(1 + c)/c(c + r)$.

17. Suppose government deficits increase such that real interest rates rise by 1.5 percentage points.

According to the Taylor rule, if inflation targets remain unchanged, then nominal interest rates should rise by

- a) less than 1 percent.
- b) between 1 and 1.5 percent.
- c) exactly 1.5 percent.
- d) between 1.5 and 2 percent.
- e) more than 2 percent.

18. In an economy described collectively by a macroeconomic policy curve of the form

$$\hat{Y}_t = -\frac{\delta}{B + \sigma}(\pi_t - \pi_t^*)$$

And an expectations augmented Phillips curve, and a partially backward-looking definition of how inflation expectations are formed, economic recovery from a recession relies on

- lower inflation increasing nominal interest rates.
- higher inflation increasing nominal interest rates.
- lower inflation decreasing nominal interest rates.
- higher inflation decreasing nominal interest rates.
- changes in real variables and not adjustments in prices.

19. In the Solow growth model, the engine of economic growth is

- population growth.
- labor force increases.
- capital stock increases.
- new finds of natural resources.
- technological progress.

20. Endogenous growth theory allows for which of the following to make a contribution to technological improvement?

- Assembly line production
- Increased worker skills
- Increased capital stock
- Research and development
- all of the above

PART II: Short Answer (30 minutes total)

1. Suppose you are given the IS and LM curves for an open economy:

$$Y = \bar{\alpha}[\hat{A}_0 - (d + nv)R] \quad \text{where } \hat{A}_0 \equiv a_0 + e_0 + GO_0 - bTA_0 + g_0 - nq$$

$$R = \frac{\mu}{h} - \left(\frac{1}{h}\right)\left(\frac{M_0}{P}\right) + \left(\frac{k}{h}\right)Y$$

1.1. (5 minutes) Solve for equilibrium income, holding the price level constant at P_0 .

1.2. (5 minutes) Show algebraically (using total differentials) what happens to income if lump sum taxes are increased?

1.3. (5 minutes) Show (algebraically) what happens to the budget surplus, T-G, using the answer from 1.2. Note: $T = TA_0 + tY$

1.4. (15 minutes) Show (algebraically) what happens to the trade surplus, also known as net exports,

X. Note: $X = g_0 - mY - n\left(\frac{EP}{P_w}\right)$ and $\left(\frac{EP}{P_w}\right) = q + vR$. You will need to figure out what ΔR is.

PART III: Interpretation (10 minutes total)

Consider this statement from Testimony of Chairman Ben S. Bernanke, on “The Outlook for the U.S. economy,” before the Joint Economic Committee, U.S. Congress, April 27, 2006.

“As the utilization rates of labor and capital approach their maximum sustainable levels, continued growth in output--if it is to be sustainable and non-inflationary--should be at a rate consistent with the growth in the productive capacity of the economy. Admittedly, determining the rates of capital and labor utilization consistent with stable long-term growth is fraught with difficulty, not least because they tend to vary with economic circumstances. Nevertheless, to allow the expansion to continue in a healthy fashion and to avoid the risk of higher inflation, policymakers must do their best to help to ensure that the aggregate demand for goods and services does not persistently exceed the economy's underlying productive capacity.”

Interpret this statement in the context of an appropriate graph, or graphs, *keeping in mind the fact that inflation is part of the discussion*. Be clear to indicate with arrows and labels what is happening in your graph or graphs. Some explanatory text might be helpful, but only to the extent that it illuminates your graphical depiction.

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