

ECON 300 Fall 2007 Midterm
Essay

1. (30 points) In the general equilibrium model of chapter 3, Mankiw assumes that consumption is a function of disposable income alone: $C = C[Y - T]$. Modify the consumption function to make consumption depend on both after tax income and the level of real money balances (M/P) consumers hold (The assumption is that real balances are a part of wealth, and wealth affects how much we consume). Show that if money demand (the demand for real balances) depends on the nominal rate of interest, $i = r + \pi$, then an increase in the rate of money growth now affects consumption, investment, and the real interest rate.
2. (20 points) Now, using your results from part (a) above, and taking into account the fact that the US is a large open economy, show the impact of an increase in the rate of growth of money (assume foreign money growth is unchanged) on
 - (a) net capital flows, net exports and the real exchange rate for the U.S.
 - (b) the nominal exchange rate and inflation rate in the US.

Multiple Choice (2 points each)

1. All other things equal, GDP will rise if
 - A. imports rise.
 - B. exports fall.
 - C. durable goods consumption rises.
 - D. military spending falls.

2. In an open economy, the supply of goods and services must be equal to
 - A. consumption.
 - B. consumption + investment + exports - imports.
 - C. consumption + investment + government purchases.
 - D. consumption + investment + government purchases - taxes.
 - E. none of the above.

3. Which of the following events will cause the unemployment rate to increase?
 - A. An increase in population, with no change in the size of the labor force
 - B. A proportionally equal increase in the labor force and the number of unemployed workers
 - C. An increase in the labor force with no change in the number of employed workers
 - D. An increase in the number of employed workers with no change in the number of unemployed workers

4. If the supplies of capital and labor are fixed and technology is unchanging, then real output is
 - A. fixed.
 - B. determined by demand.
 - C. uncertain.
 - D. subject to wide fluctuations.

5. Suppose that a consumer has a marginal propensity to consume of 0.6. If this consumer earns an extra \$8, her savings would be expected to increase by
 - A. \$2.20.
 - B. \$4.80.
 - C. \$2.80.
 - D. \$3.20

6. If net capital outflow is negative, then
 - A. $S - I$ is negative.
 - B. private savings exceeds private investment.
 - C. NX is positive.
 - D. public saving exceeds public investment.
 - E. all of the above.

7. The nominal interest rate is equal to the real interest rate plus
 - A. accounting profit.
 - B. economic profit.
 - C. taxes.
 - D. the change in inflation.
 - E. none of the above.

8. In a closed economy that is in equilibrium, investment is equal to
 - A. private saving.
 - B. public saving.
 - C. private saving plus public saving.
 - D. disposable income minus consumption.

9. An increase in the expected rate of inflation will
 - A. lower the demand for real balances because the real interest rate will rise.
 - B. lower demand for real balances because the nominal interest rate will rise.
 - C. increase the demand for real balances because the real interest rate will fall.
 - D. increase the demand for real balances because the nominal interest rate will rise.

10. If the United States has an inflation rate of 4 percent, Great Britain has an inflation rate of 8 percent, and the United States dollar has a nominal appreciation against the British pound of 3 percent, then the real appreciation of the United States dollar against the British pound is
 - A. 1 percent.
 - B. 13 percent.
 - C. 15 percent.
 - D. 25 percent.
 - E. none of the above.

11. According to the quantity equation, if M increases by 3 percent and V increases by 1 percent, then
 - A. real income increases by approximately 4 percent.
 - B. the price level increases by approximately 3 percent.
 - C. the nominal interest rate increases by approximately 1 percent.
 - D. nominal income increases by approximately 4 percent.

12. Suppose that there is a negative shock to investment demand: that is, at every interest rate, the desired amount of investment declines. In a closed economy with the national saving fixed, the real interest rate will
 - A. fall.
 - B. remain constant.
 - C. rise.
 - D. first fall and then rise.

13. According to the classical dichotomy, which of these magnitudes is affected by monetary policy?
 - A. The price level
 - B. The real wage
 - C. The real interest rate
 - D. The rate of growth of real GDP.

14. The Fisher equation states that a 1 percent rise in the rate of inflation causes a 1 percent rise in the
 - A. real interest rate.
 - B. nominal interest rate.
 - C. money supply.
 - D. number of transactions.

15. If a production function has the property of diminishing marginal product, then doubling
- A. all of the inputs will less than double the output.
 - B. all of the inputs will double the output.
 - C. all of the inputs will more than double the output.
 - D. one of the inputs will reduce its marginal product.
16. In the model of Chapter 5, if the government prevented the import of foreign cars, then, in the resulting equilibrium, net exports would
- A. rise because fewer cars would be imported.
 - B. remain constant because saving and investment would not change.
 - C. fall because the real exchange rate would rise.
 - D. rise because the real exchange rate would fall.
17. A competitive firm rents capital until the marginal product of capital equals the
- A. real wage.
 - B. rental price of capital.
 - C. price of output.
 - D. capital/labor ratio.
18. The government is running a budget surplus if
- A. government spending is greater than tax revenue.
 - B. tax revenue is greater than government spending.
 - C. tax revenue is greater than consumption spending.
 - D. tax revenue is greater than investment spending.
19. Private saving is equal to
- A. income - consumption.
 - B. income - consumption - taxes.
 - C. income - consumption - government spending.
 - D. income - consumption - government spending - taxes.
20. One effect of an unexpected rise in inflation is that wealth is redistributed from
- A. borrowers to lenders.
 - B. lenders to borrowers.
 - C. young people to old people.
 - D. government to firms.
 - E. none of the above.
21. In a small open economy, the interest rate is determined by the
- A. equilibrium of saving and investment.
 - B. interest rate in the rest of the world.
 - C. excess of government spending over government revenue.
 - D. value of net capital outflow.
22. If a country's real exchange rate rises (appreciates), then
- A. net exports rise.
 - B. net exports fall.
 - C. exports and imports rise by the same amount.
 - D. exports and imports fall by the same amount.

23. Choose the pair of words that best complete this sentence: If government purchases increase, national saving will ____ and the equilibrium real exchange rate will ____.
- A. fall; fall
 - B. fall; rise
 - C. rise; rise
 - D. rise; fall
24. Suppose that a bicycle costs \$300 in the United States and 150 pounds in Great Britain. What would the nominal exchange rate have to be for purchasing-power parity to hold?
- A. 0.5
 - B. 1
 - C. 2
 - D. 2.5
25. If the Chinese government wants to reduce its trade surplus with the United States, which measure would achieve this?
- A. Remove the import quotas for U.S. cars.
 - B. Impose export quotas on Chinese made toys.
 - C. Enact rules that would make Chinese companies less competitive.
 - D. None of the above.

ECON 300
Final Exam
Spring, 2007

Answer each of the following essay questions in three to five blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point. Record your multiple choice answers on the exam, and submit your exam along with your blue book.

Essay:

1. (30 points) Consider an economy with a government controlled (exogenous) saving rate (s), exogenous population growth (n), a fixed depreciation rate (d), and exogenous technical progress (g). Suppose this economy is at steady state above its golden rule capital labor ratio.
 - a. (10 points) Write down the fundamental equation of growth (capital accumulation equation), draw a graph of its major components to illustrate the concept of steady state. On your graph, show the golden rule capital labor ratio.
 - b. (5 points) Fully explain the economic intuition behind the stability of steady state.
 - c. (15 points) Suppose the government wants to move the economy to the golden rule steady state. What action could the government take to achieve this goal? Using graphs and written explanation, describe the transition of the economy from its initial steady state to the golden rule. What happens to consumption and income per person (in levels) in the transition period and in the new steady state. Are the growth rates of consumption and income per worker different in the two steady states?

2. (40 points) Suppose the Federal Reserve follows the specific policy rule,

$$r = r_{LR} + b[\pi - \pi^*], \quad (1)$$

where r_{LR} is the long-run equilibrium real interest rate; that is, r_{LR} is the real interest rate given by the IS curve when $Y = \bar{Y}$. In addition, π^* is the Federal Reserve's target level of inflation, and b is some positive parameter. This rule states that the Federal Reserve raises the real interest rate above its long-run level (r_{LR}) when inflation is above its target and lowers it below its long-run level when inflation is below its target.

- a. With this monetary policy rule, is the MP curve upward-sloping, flat, or downward-sloping? Explain.
- b. Is the AD curve upward-sloping, flat, or downward-sloping? On the AD curve, what level of Y is associated with $\pi = \pi^*$? Explain.
- c. Suppose some development raises r_{LR} but does not change Y . How, if at all, does this affect the AD curve?
- d. Assume the economy starts in a situation where $\pi = \pi^*$ and $Y = \bar{Y}$. Describe the immediate effects of each of the following developments on output, inflation, and the real interest rate:
 - i. Government purchases rise.
 - ii. There is an unfavorable inflation shock.
 - iii. The Federal Reserve reduces its inflation target, π^* .

3. Extra credit 10 points Role your own. Write and answer your own question.

Multiple Choice:

30 points, circle correct answer

1. Which of the following statements describes the difference between nominal and real GDP?
 - A. Real GDP includes only goods; nominal GDP includes goods and services.
 - B. Real GDP is measured using constant base-year prices; nominal GDP is measured using current prices.
 - C. Real GDP is equal to nominal GDP less the depreciation of the capital stock.
 - D. Real GDP is equal to nominal GDP multiplied by the CPI.
2. The consumer price index (CPI)
 - A. measures the price of a fixed basket of goods and services.
 - B. measures the price of a basket of goods and services that constantly changes as the composition of consumer spending changes.
 - C. measures the amount of money that it takes to produce a fixed level of utility.
 - D. is one of the many statistics in the National Income Accounts.
3. In which case is total expenditure in an economy not equal to total income?
 - A. if total saving is larger than total investment
 - B. if net exports are not zero
 - C. if inventory investment is negative
 - D. none of the above—they are always equal
4. One possible benefit from inflation is:
 - A. inflation causes restaurants to update their menus more often.
 - B. inflation reduces distortions to relative prices.
 - C. if nominal wages are fixed, inflation decreases real wages.
 - D. if nominal wages are fixed, inflation increases real wages.
5. A competitive firm rents capital until the marginal product of capital equals the
 - A. real inflation.
 - B. rental price of labor.
 - C. rental price of capital.
 - D. capital/labor ratio.

6. Suppose that a consumer has a marginal propensity to consume of 0.6. If this consumer earns an extra \$5, her consumption spending would be expected to increase by
- A. \$6.00.
 - B. \$5.60.
 - C. \$3.00.
 - D. \$3.60.
7. Okun's law expresses a relationship between a change in
- A. the price level and a change in real GDP.
 - B. the price level and a change in the unemployment rate.
 - C. investment and change in the unemployment rate.
 - D. real GDP and a change in the unemployment rate.
8. The supply of loanable funds, or "national saving," is equal to
- A. income - consumption - government spending - taxes.
 - B. income - consumption.
 - C. income - consumption - taxes.
 - D. income - consumption - government spending.
9. In a closed economy with output fixed, an increase in government spending matched by an equal increase in taxes will
- A. increase consumption.
 - B. increase the interest rate.
 - C. increase investment.
 - D. leave all other variables unchanged.
10. If a firm with a constant returns to scale production function pays all factors their marginal products, then
- A. economic and accounting profits are both zero.
 - B. economic profit is zero and accounting profit is positive.
 - C. economic profit is positive and accounting profit is zero.
 - D. economic and accounting profit are both positive.

11. According to the quantity equation, if M increases by 6 percent and V increases by 1 percent, then
- A. real income increases by approximately 5 percent.
 - B. the price level increases by approximately 6 percent.
 - C. the nominal interest rate increases by approximately 7 percent.
 - D. nominal income increases by approximately 7 percent.
12. According to the classical dichotomy, which of these magnitudes is affected by monetary policy?
- A. The rate of population growth.
 - B. The real wage.
 - C. The real interest rate.
 - D. The rate of growth of real GDP item[E.] None of the above.
13. In the small open economy model of Chapter 5, if a country begins in a position of balanced trade, what happens when the government decreases taxes?
- A. The interest rate rises.
 - B. The balance of trade goes into surplus.
 - C. Net exports decrease.
 - D. Net capital outflow becomes positive.
 - E. All of the above.
14. If the United States has an inflation rate of 10 percent, Great Britain has an inflation rate of 12 percent, and the United States dollar has a nominal appreciation against the British pound of 3 percent, then the real appreciation of the United States dollar against the British pound is
- A. 1 percent.
 - B. 13 percent.
 - C. 15 percent.
 - D. 25 percent.
15. If the Chinese government wants to reduce its trade surplus with the United States, which measure would achieve this?
- A. Remove the import quotas for U.S. cars.
 - B. Impose export quotas on Japanese cars.
 - C. Enact a five year plan that would make Chinese companies less competitive.
 - D. None of the above.

16. If the capital stock is above the steady-state level, then investment
- A. is smaller than depreciation.
 - B. is larger than depreciation.
 - C. is equal to depreciation.
 - D. could be higher than, lower than, or equal to depreciation.
17. Frictional unemployment occurs because
- A. the minimum wage is too high.
 - B. unions exert pressure in the labor market.
 - C. rigidities exist in the wage-setting process.
 - D. it takes time to match firms and workers.
18. Measured unemployment may be lower than actual unemployment because
- A. measured unemployment does not include the frictionally unemployed.
 - B. some individuals may want a job but have become discouraged and stopped looking for one.
 - C. some individuals claim to be unemployed when they are not looking very seriously for a jobs.
 - D. measured unemployment does not include teenage unemployment.
19. Efficiency wage theories claim that firms may pay high real wages in order to
- A. avoid the threat of unionization.
 - B. make workers more productive.
 - C. discourage unskilled workers from applying.
 - D. reduce the level of frictional unemployment.
20. If the government increases the amount of unemployment insurance that unemployed workers can collect, the amount of frictional unemployment would be expected to
- A. fall.
 - B. remain constant.
 - C. rise.
 - D. first rise and then fall.

21. If net exports are positive, which of the following is false?
- A. Domestic output exceeds domestic spending.
 - B. Domestic saving exceeds domestic investment.
 - C. Net capital outflow is positive.
 - D. There is a balance of trade deficit.
22. In the Solow growth model with population growth (n) and technological progress (g), the steady-state growth rate of total output is
- A. 0.
 - B. n .
 - C. g .
 - D. $n + g$.
23. In a Solow model with population growth and technological progress, the steady state level of consumption is maximized when the steady state marginal product of capital equals the rate of depreciation plus
- A. the rate of population growth plus the rate of technological change.
 - B. the rate of population growth.
 - C. the rate of technological change.
 - D. none of the above.
24. The steady state level of income per person in a country is a function of all the following EXCEPT
- A. the rate of saving.
 - B. the current level of income in the country.
 - C. the efficiency with which the economy employs the factors of production.
 - D. the population growth rate.
25. In the basic endogenous growth model, the production function exhibits
- A. decreasing returns.
 - B. constant returns.
 - C. increasing returns.
 - D. none of the above.

26. In the Solow model, savings leads to _____ growth, but in the $Y=AK$ model, savings can lead to _____ growth.
- A. negative; eternal
 - B. temporary; persistent
 - C. exogenous; endogenous
 - D. consumption; technological
27. An increase in aggregate demand, such as that due to an increase in government purchases increases
- A. both output and inflation in the long run.
 - B. output in the long run but not in the short run.
 - C. inflation in the short run but not in the long run.
 - D. output in the short run but not in the long run.
28. Faced with an adverse supply shock, if the central bank wants to keep output fixed, it should
- A. decrease the real interest rate.
 - B. increase the real interest rate.
 - C. decrease government spending.
 - D. increase government spending.
29. The relationship between interest rates and the level of income that arises in the market for goods and services is called the
- A. MP curve.
 - B. IS curve.
 - C. aggregate demand curve.
 - D. aggregate supply curve.
30. Stagflation—a period of rising unemployment coupled with rising inflation—could most easily result from a(n)
- A. increase in taxes.
 - B. decrease in taxes.
 - C. increase in the price of oil.
 - D. decrease in the price of oil.

ECON 300 Spring 2007 Midterm

Essay

In 2000, the U.S. government ran a budget surplus equivalent to 2.4% of GDP. From 2001 through today, the government has run budget deficits peaking at 3.6% of GDP in 2004. This swing from a surplus to deficit is very similar (as a share of GDP) to the increase in deficit spending that occurred during Regan's first term in office. Yet by 2005, real interest rates were lower than any time in the previous six years, and the trade deficit was larger (as a share of GDP) than any time since the mid 80s.

1. (30 points) Using any models, graphs and equations you need, explain how it might be possible for the U.S. to experience a growing fiscal deficit and simultaneously face falling real interest rates. (Hint, as one possible explanation, consider the last homework problem from Ch. 5—covered in class on Wednesday.)
2. (30 points) Now, taking into account that the US is a large open economy, use whatever models, graphs, equations you need to explain how the low real interest rate and US fiscal deficit would affect
 - (a) the levels of real investment, consumption, net exports and the real exchange rate for the U.S.
 - (b) the nominal exchange rate and inflation rate in the US. (Assume that US and foreign central banks did not change their monetary policy between 2000 and 2005.)

Multiple Choice (2 points each)

1. In a closed economy, the supply of goods and services must be equal to
 - A. consumption.
 - B. consumption + investment.
 - C. consumption + investment + government purchases.
 - D. consumption + investment + government purchases - taxes.
2. If production remains the same and all prices rise by 10 percent, then real GDP
 - A. rises by 10 percent and nominal GDP is constant.
 - B. and nominal GDP are both constant.
 - C. is constant and nominal GDP is reduced by 10 percent.
 - D. is constant and nominal GDP increases by 10 percent.
3. If a production function has the property of diminishing marginal product, then doubling
 - A. all of the inputs will less than double the output.
 - B. all of the inputs will double the output.
 - C. all of the inputs will more than double the output.
 - D. one of the inputs will reduce its marginal product.
4. Suppose that a consumer has a marginal propensity to consume of 0.7. If this consumer earns an extra \$4, her consumption spending would be expected to increase by
 - A. \$1.20.
 - B. \$0.80.
 - C. \$2.80.
 - D. \$3.20
5. If a production function has two inputs and exhibits constant returns to scale, then tripling both inputs will cause the output to
 - A. reduce by one third.
 - B. stay the same.
 - C. double.
 - D. triple.
6. A competitive firm hires labor until the marginal product of labor equals the
 - A. real wage.
 - B. rental price of capital.
 - C. price of output.
 - D. capital/labor ratio.
7. GDP measures
 - A. expenditure on all final goods and services.
 - B. total income of everyone in the economy.
 - C. total value-added by all firms in the economy.
 - D. all of the above.
8. If net capital outflow is positive, then
 - A. $S - I$ is negative.
 - B. private savings exceeds private investment.
 - C. NX is positive.
 - D. public saving exceeds public investment.

9. The nominal interest rate is equal to the real interest rate plus
 - A. accounting profit.
 - B. economic profit.
 - C. taxes.
 - D. inflation.
10. In a closed economy that is in equilibrium, investment is equal to
 - A. private saving.
 - B. public saving.
 - C. private saving plus public saving.
 - D. disposable income minus consumption.
11. An increase in the expected rate of inflation will
 - A. lower the demand for real balances because the real interest rate will rise.
 - B. lower demand for real balances because the nominal interest rate will rise.
 - C. increase the demand for real balances because the real interest rate will fall.
 - D. increase the demand for real balances because the nominal interest rate will rise.
12. In the full model of the economy presented in chapter 3, the variable that adjusts to equilibrate the supply and demand for goods and services is
 - A. government spending.
 - B. consumption.
 - C. taxes.
 - D. the real interest rate.
13. If the United States has an inflation rate of 10 percent, Great Britain has an inflation rate of 12 percent, and the United States dollar has a nominal appreciation against the British pound of 3 percent, then the real appreciation of the United States dollar against the British pound is
 - A. 1 percent.
 - B. 13 percent.
 - C. 15 percent.
 - D. 25 percent.
14. According to the quantity equation, if M increases by 6 percent and V increases by 1 percent, then
 - A. real income increases by approximately 7 percent.
 - B. the price level increases by approximately 5 percent.
 - C. the nominal interest rate increases by approximately 5 percent.
 - D. nominal income increases by approximately 7 percent.
15. Suppose that there is a positive shock to investment demand: that is, at every interest rate, the desired amount of investment rises. In a closed economy with the national saving fixed, the real interest rate will
 - A. fall.
 - B. remain constant.
 - C. rise.
 - D. first fall and then rise.

16. According to the classical dichotomy, which of these magnitudes is affected by monetary policy?
 - A. The price level
 - B. The real wage
 - C. The real interest rate
 - D. The rate of growth of real GDP.
17. The price of one currency in terms of another currency, such as 150 yen for \$1, is an example of
 - A. a nominal exchange rate.
 - B. a real exchange rate.
 - C. purchasing-power parity.
 - D. a constant world interest rate.
18. If net exports are positive, which of the following is false?
 - A. Domestic output exceeds domestic spending.
 - B. Domestic saving exceeds domestic investment.
 - C. Net capital outflow is positive.
 - D. There is a balance of trade deficit.
19. The quantity theory of money states that if the money supply doubles and output is constant, prices will
 - A. fall by half.
 - B. remain the same.
 - C. double.
 - D. fall only if velocity rises.
20. An increase in the expected rate of inflation will
 - A. lower the demand for real balances because the real interest rate will rise.
 - B. lower demand for real balances because the nominal interest rate will rise.
 - C. increase the demand for real balances because the real interest rate will fall.
 - D. increase the demand for real balances because the nominal interest rate will rise.

EXTRA CREDIT

21. The expected future money supply does not have an effect on
 - A. expected future inflation.
 - B. the current price level.
 - C. the current nominal money supply.
 - D. the future price level.
22. The ex ante real interest rate differs from the ex post real interest rate only when
 - A. the money supply grows at a constant rate.
 - B. the money supply remains the same.
 - C. the money supply falls at a constant rate.
 - D. actual inflation differs from expected inflation.
23. In the model of Chapter 5, if the government prevented the import of foreign cars, then, in the resulting equilibrium, net exports would
 - A. rise because fewer cars would be imported.
 - B. remain constant because saving and investment would not change.
 - C. fall because the real exchange rate would rise.
 - D. rise because the real exchange rate would fall.

ECON 300
Final Exam
Spring, 2004

Answer the following essay questions in three to four blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point. Record your multiple choice answers on the exam, and submit your exam along with your blue book.

Essay:

1. (30 points) Demographers predict that the US will have zero population growth in the twenty-first century, in contrast to average population growth of about one percent per year in the twentieth century. Use the Solow model to forecast the effect of this slowdown in population growth on the growth of total output and the growth of output per person. Consider the effects both in steady state and in the transition between steady states.
2. (40 points) The Federal Reserve follows a real interest rate rule based on a target level of inflation, π^* , and a target for real output, Y_n (full employment output).
 - a. Write down a specific linear version of the Fed's Monetary Policy rule and fully explain how the central bank responds to changes in current inflation, current real output, its inflation target, and its estimate of the natural rate of output.
 - b. With this monetary policy rule, is the MP curve upward-sloping, flat, or downward-sloping in r, Y space? Explain.
 - c. Assume the economy starts in a situation where $\pi = \pi^*$, and $Y = Y_n$. Thus the economy is in a long-run equilibrium. Using both AD-IA and IS-MP models describe the short run and long run effects of each of the following developments on output, inflation, and the real interest rate:
 - i. Government purchases rise.
 - ii. There is an unfavorable inflation shock.
 - iii. The Federal Reserve reduces its inflation target, π^* .

Multiple Choice:

30 points, circle correct answer

1. Which of the following is a flow variable?
 - A. The value of the house in which you live
 - B. The balance in your savings account
 - C. Your monthly consumption of hamburgers
 - D. The number of hamburgers in your refrigerator at the beginning of the month

2. If production remains the same and all prices double, then real GDP
 - A. and nominal GDP are both constant.
 - B. is constant and nominal GDP is reduced by half.
 - C. is constant and nominal GDP doubles.
 - D. doubles and nominal GDP is constant.

3. Suppose that the size of the labor force is 100 million and that the unemployment rate is 5 percent. Which of the following actions would reduce the unemployment rate the most?
 - A. 1 million unemployed people get jobs.
 - B. 2 million unemployed people leave the labor force.
 - C. 3 million people join the labor force and they all get jobs.
 - D. 10 million people join the labor force and half of them get jobs.

4. If a production function has the property of diminishing marginal product, then doubling
 - A. all of the inputs will less than double the output.
 - B. all of the inputs will double the output.
 - C. all of the inputs will more than double the output.
 - D. one of the inputs will reduce its marginal product.

5. A competitive firm rents capital until the marginal product of capital equals the
 - A. real wage.
 - B. rental price of capital.
 - C. price of output.
 - D. capital/labor ratio.

6. Suppose that a consumer has a marginal propensity to consume of 0.7. If this consumer earns an extra \$3, her consumption spending would be expected to increase by
- A. \$0.90.
 - B. \$1.70.
 - C. \$1.30.
 - D. \$2.10.
7. The real interest rate is equal to the nominal interest rate minus
- A. accounting profit.
 - B. economic profit.
 - C. taxes.
 - D. inflation.
8. Suppose that there is a positive shock to investment demand: that is, at every interest rate, the desired amount of investment rises. In a closed economy with the national saving fixed, the real interest rate will
- A. fall.
 - B. remain constant.
 - C. rise.
 - D. first fall and then rise.
9. In a closed economy with output fixed, an increase in government spending matched by an equal increase in taxes will
- A. increase consumption.
 - B. increase the interest rate.
 - C. increase investment.
 - D. leave all other variables unchanged.
10. According to the quantity equation, if M increases by 3 percent and V increases by 2 percent, then
- A. real income increases by approximately 5 percent.
 - B. the price level increases by approximately 5 percent.
 - C. the nominal interest rate increases by approximately 5 percent.
 - D. nominal income increases by approximately 5 percent.

11. According to the classical dichotomy, which of these magnitudes is affected by monetary policy?
- A. The price level
 - B. The real wage
 - C. The real interest rate
 - D. The rate of growth of real GDP
12. In the small open economy model of Chapter 5, starting from balanced trade, an increase in the world interest rate from a fiscal expansion abroad leads to a
- A. negative net capital outflow and a trade surplus.
 - B. positive net capital outflow and a trade surplus.
 - C. positive net capital outflow and a trade deficit.
 - D. negative net capital outflow and a trade deficit.
13. Choose the pair of words that best complete this sentence: If government purchases increase, national saving will ----- and the equilibrium real exchange rate will -----.
- A. fall; fall
 - B. fall; rise
 - C. rise; rise
 - D. rise; fall
14. If the United States has an inflation rate of 10 percent, Great Britain has an inflation rate of 12 percent, and the United States dollar has a nominal appreciation against the British pound of 3 percent, then the real appreciation of the United States dollar against the British pound is
- A. 1 percent.
 - B. 13 percent.
 - C. 15 percent.
 - D. 25 percent.
15. If the Japanese government wants to reduce its trade surplus with the United States, which measure would achieve this?
- A. Remove the import quotas for U.S. cars.
 - B. Impose export quotas on Japanese cars.
 - C. Enact legislation that would make Japanese companies less competitive.
 - D. None of the above.

16. Suppose that 2 percent of the employed lose their jobs each month ($s = 0.02$) and 38 percent of the unemployed find a job each month ($f = 0.38$). Then, the steady-state rate of unemployment is
- A. 2 percent.
 - B. 5 percent.
 - C. 16 percent.
 - D. 36 percent.
17. Frictional unemployment occurs because
- A. the minimum wage is too high.
 - B. unions exert pressure in the labor market.
 - C. rigidities exist in the wage-setting process.
 - D. it takes time to match firms and workers.
18. Measured unemployment may be lower than actual unemployment because
- A. measured unemployment does not include the frictionally unemployed.
 - B. some individuals may want a job but have become discouraged and stopped looking for one.
 - C. some individuals claim to be unemployed when they are not looking very seriously for a jobs.
 - D. measured unemployment does not include teenage unemployment.
19. The Solow growth model assumes that the production function exhibits
- A. decreasing returns to scale.
 - B. constant returns to scale.
 - C. increasing returns to scale.
 - D. increasing marginal product.
20. Suppose that the capital stock is 100, the depreciation rate is 10 percent per year, and output is 25. Assuming no growth in labor or technology, what must the saving rate be to keep the capital stock constant?
- A. 2.5 percent
 - B. 10 percent
 - C. 25 percent
 - D. 40 percent

21. An economy starts off in a steady state with less capital than at the Golden Rule level. Now the saving rate changes to the level that will achieve the Golden Rule. What is the path of consumption during the transition to the Golden Rule steady state?
- A. It is lower, then higher than in the initial steady state.
 - B. It is higher, then lower than in the initial steady state.
 - C. It is always lower than in the initial steady state.
 - D. It is always higher than in the initial steady state.
22. In the Solow growth model with population growth (n) and technological progress (g), the steady-state growth rate of total output is
- A. 0.
 - B. n .
 - C. g .
 - D. $n + g$.
23. In a Solow model with population growth and technological progress, the steady state level of consumption is maximized when the steady state marginal product of capital equals the rate of depreciation plus
- A. the rate of population growth plus the rate of technological change.
 - B. the rate of population growth.
 - C. the rate of technological change.
 - D. none of the above.
24. The steady state level of income per person in a country is a function of all the following EXCEPT
- A. the rate of saving.
 - B. the current level of income in the country.
 - C. the efficiency with which the economy employs the factors of production.
 - D. the population growth rate.
25. In the basic endogenous growth model, the production function exhibits
- A. decreasing returns.
 - B. constant returns.
 - C. increasing returns.
 - D. none of the above.

26. In the Solow model, savings leads to _____ growth, but in the $Y=AK$ model, savings can lead to _____ growth.
- A. negative; eternal
 - B. temporary; persistent
 - C. exogenous; endogenous
 - D. consumption; technological
27. An increase in aggregate demand, such as that due to an increase in government purchases increases
- A. both output and inflation in the long run.
 - B. output in the long run but not in the short run.
 - C. inflation in the short run but not in the long run.
 - D. output in the short run but not in the long run.
28. Faced with an adverse supply shock, if the central bank wants to stabilize output, it should
- A. decrease the real interest rate.
 - B. increase the real interest rate.
 - C. decrease government spending.
 - D. increase government spending.
29. The relationship between interest rates and the level of income that arises in the market for goods and services is called the
- A. MP curve.
 - B. IS curve.
 - C. aggregate demand curve.
 - D. aggregate supply curve.
30. If investment becomes less sensitive to the interest rate, then the
- A. MP curve becomes steeper.
 - B. MP curve becomes flatter.
 - C. IS curve becomes steeper.
 - D. IS curve becomes flatter.

Intermediate Macroeconomics Midterm Exam
Midterm Exam: March 2, 2004

Answer the following essay questions in three to four blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay

1. (35 points) Recently Alan Greenspan suggested making the Bush tax cuts permanent. When asked how he would come up with the money to pay for extending the 2001 and 2003 individual tax cuts, he argued that "it should be taken out on the expenditure side." In other words, the tax cuts should be matched with reductions in spending.

Suppose the U.S. government decided to cut federal taxes and decrease government spending by the same amount. Taking into account that the US is a large open economy that influences world capital markets, fully explain the impact of such a change on:

- world real interest rates,
- the level of investment, consumption, and savings in the U.S.,
- the level of investment, consumption, and savings in a small open economy such as Mexico,
- the real exchange rate between the U.S. and Mexico.

Explain how your answer does (or doesn't) depend on the marginal propensity to consume in the U.S.

2. (25 points) On Monday March 1, 2004, the European Union imposed new tariffs on U.S. made goods which could total \$300 million in key industrial sectors. Discuss the economics of such a policy. How would the policy affect the U.S. trade deficit? How would it affect the exchange rate between the euro and the dollar? Who would be hurt by such a policy? Who would benefit?

Multiple Choice (2 points each)

1. In which case is total expenditure in an economy not equal to total income?
 - A. if total saving is larger than total investment
 - B. if net exports are not zero
 - C. if inventory investment is negative
 - D. none of the above--they are always equal

2. If production remains the same and all prices double, then real GDP
 - A. and nominal GDP are both constant.
 - B. is constant and nominal GDP is reduced by half.
 - C. is constant and nominal GDP doubles.
 - D. doubles and nominal GDP is constant.

3. If a production function has the property of diminishing marginal product, then doubling
 - A. all of the inputs will less than double the output.
 - B. all of the inputs will double the output.
 - C. all of the inputs will more than double the output.
 - D. one of the inputs will reduce its marginal product.

4. Suppose that a consumer has a marginal propensity to consume of 0.8. If this consumer earns an extra \$4, her consumption spending would be expected to increase by
 - A. \$1.60.
 - B. \$0.80.
 - C. \$2.40.
 - D. \$3.20

5. If a production function has two inputs and exhibits constant returns to scale, then doubling both inputs will cause the output to
 - A. reduce by half.
 - B. stay the same.
 - C. double.
 - D. quadruple.

6. A competitive firm rents capital until the marginal product of capital equals the
 - A. real wage.
 - B. rental price of capital.
 - C. price of output.
 - D. capital/labor ratio.

7. GDP measures
 - A. expenditure on all final goods and services.
 - B. total income of everyone in the economy.
 - C. total value-added by all firms in the economy.
 - D. all of the above.

8. If net capital outflow is positive, then
 - A. $S - I$ is negative.
 - B. private savings exceeds private investment.
 - C. NX is positive.
 - D. public saving exceeds public investment.

9. The real interest rate is equal to the nominal interest rate minus
 - A. accounting profit.
 - B. economic profit.
 - C. taxes.
 - D. inflation.

10. In a closed economy that is in equilibrium, investment is equal to
 - A. private saving.
 - B. public saving.
 - C. private saving plus public saving.
 - D. disposable income minus consumption.

11. An increase in the expected rate of inflation will
 - A. lower the demand for real balances because the real interest rate will rise.
 - B. lower demand for real balances because the nominal interest rate will rise.
 - C. increase the demand for real balances because the real interest rate will fall.
 - D. increase the demand for real balances because the nominal interest rate will rise.

12. In the full model of the economy presented in chapter 3, the variable that adjusts to equilibrate the supply and demand for goods and services is
 - A. government spending.
 - B. consumption.
 - C. taxes.
 - D. the real interest rate.

13. If the United States has an inflation rate of 10 percent, Great Britain has an inflation rate of 12 percent, and the United States dollar has a nominal appreciation against the British pound of 3 percent, then the real appreciation of the United States dollar against the British pound is
- A. 1 percent.
 - B. 13 percent.
 - C. 15 percent.
 - D. 25 percent.
14. According to the quantity equation, if M increases by 6 percent and V increases by 1 percent, then
- A. real income increases by approximately 7 percent.
 - B. the price level increases by approximately 5 percent.
 - C. the nominal interest rate increases by approximately 5 percent.
 - D. nominal income increases by approximately 7 percent.
15. Suppose that there is a positive shock to investment demand: that is, at every interest rate, the desired amount of investment rises. In a closed economy with the national saving fixed, the real interest rate will
- A. fall.
 - B. remain constant.
 - C. rise.
 - D. first fall and then rise.
16. According to the classical dichotomy, which of these magnitudes is affected by monetary policy?
- A. The price level
 - B. The real wage
 - C. The real interest rate
 - D. The rate of growth of real GDP.
17. The price of one currency in terms of another currency, such as 150 yen for \$1, is an example of
- A. a nominal exchange rate.
 - B. a real exchange rate.
 - C. purchasing-power parity.
 - D. a constant world interest rate.
18. If net exports are positive, which of the following is false?
- A. Domestic output exceeds domestic spending.
 - B. Domestic saving exceeds domestic investment.
 - C. Net capital outflow is positive.
 - D. There is a balance of trade deficit.
19. The quantity theory of money states that if the money supply doubles and output is constant, prices will
- A. fall by half.
 - B. remain the same.
 - C. double.
 - D. fall only if velocity rises.
20. The supply of loanable funds, or "national saving," is equal to
- A. income - consumption.
 - B. income - consumption - taxes.
 - C. income - consumption - government spending.
 - D. income - consumption - government spending - taxes.

Intermediate Macroeconomics
Midterm Exam
March 6, 2003

Answer KEY

Answer the following essay questions in three to four blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay 35 points each

1. Suppose you have graduated with your economics degree and have been appointed to head the Ministry of Finance of a small open economy such as Thailand. The President of this small open economy has asked for your analysis of the impact of U.S. fiscal policy on your economy. George Bush has proposed that the U.S. government cut taxes and increasing federal spending on defense and homeland security. Provide a detailed explanation of the impact of these U.S. policy changes on your small economy. In particular, show graphically and fully explain (tell the story) the impact on:

- The trade balance and net capital flows for your small open economy.
- The real exch. rate between your economy and the U.S. currency.
- Real consumption, investment and total output in your economy.

2. In the general equilibrium model of chapter 3, Mankiw assumes that consumption is a function of disposable income alone: $C = C(Y-T)$. Modify the consumption function to make consumption depend on both after tax income and the real interest rate. Explain why you think this might make sense.

- Consider a drop in the world real interest rates (due to a decline in global demand for loans associated with the bursting of the Dot Com Bubble).
- Explain the impact on real Savings and Investment in the U.S.
- How do your results differ if consumption does not depend on the real interest rate?
- Assuming no change in the rate of growth of money in the U.S., will the nominal interest rate change when the world real interest rate declines?

Multiple Choice (2 points each)

1. The consumer price index (CPI)
 - A. measures the price of a fixed basket of goods and services.
 - B. measures the price of a basket of goods and services that constantly changes as the composition of consumer spending changes.
 - C. measures the amount of money that it takes to produce a fixed level of utility.
 - D. is one of the many statistics in the National Income Accounts.

2. The supply of loanable funds, or "national saving," is equal to
 - A. income - consumption.
 - B. income - consumption - taxes.

- C. income - consumption - government spending.
- D. income - consumption - government spending - taxes.

3. Which of the following events will cause the unemployment rate to decrease?
- A. An increase in population, with no change in the size of the labor force
 - B. A proportionately equal decrease in the labor force and the number of unemployed workers
 - C. A decrease in the labor force with no change in the number of unemployed workers
 - D. A decrease in the number of unemployed workers with no change in the number of employed workers.
4. Suppose that a consumer has a marginal propensity to consume of 0.7. If this consumer earns an extra \$2, her consumption spending would be expected to increase by
- A. \$0.60.
 - B. \$0.70.
 - C. \$1.40.
 - D. \$1.70
5. If a production function has two inputs and exhibits constant returns to scale, then doubling both inputs will cause the output to
- A. reduce by half. B. stay the same.
 - C. double. D. quadruple.
6. A competitive firm hires labor until the marginal product of labor equals the
- A. real wage.
 - B. rental price of capital.
 - C. price of output.
 - D. capital/labor ratio.
7. GDP measures
- A. expenditure on all final goods and services.
 - B. total income of everyone in the economy.
 - C. total value-added by all firms in the economy.
 - D. all of the above.
8. In the full model of the economy presented in chapter 3, the variable that adjusts to equilibrate the supply and demand for goods and services is
- A. government spending.
 - B. consumption.
 - C. taxes.
 - D. the real interest rate.
9. According to the quantity equation, if M increases by 3 percent and V increases by 2 percent, then
- A. real income increases by approximately 5 percent.
 - B. the price level increases by approximately 5 percent.
 - C. the nominal interest rate increases by approximately 5 percent.
 - D. nominal income increases by approximately 5 percent.

10. Consider the following data on inflation and nominal interest rates

Year	Inflation Rate	Nominal Interest Rate
1	5%	10%
2	10%	5%

By how much has the real interest rate changed between year 1 and year 2?

- A. It has increased 5 percent. B. It has decreased 5 percent.
C. It has increased 10 percent. D. It has decreased 10 percent.

11. According to the classical dichotomy, which of these magnitudes is affected by monetary policy?

- A. The price level
B. The real wage
C. The real interest rate
D. The rate of growth of real GDP.

12. Consider the following table

Consumption of foreign goods and services	100
Consumption of domestic goods and services	900
Investment of foreign goods and services	20
Investment of domestic goods and services	180
Government purchases of foreign goods and services	0
Government purchases of domestic goods and services	500
Exports	100

Based on the data, what are total imports?

- A. 0
B. 120
C. 1,000
D. 1,580

13. Consider the following data on the Transalpinian economy

$$Y = 1,000$$

$$C = 700$$

$$G = 150$$

$$I = 250 - 10r^*$$

The world interest rate is 5 percent. What are net exports of Transalpinia?

- A. 50
B. -50
C. 150
D. -150

14. The price of one currency in terms of another currency, such as 150 yen for \$1, is an example of
- A. a nominal exchange rate.
 - B. a real exchange rate.
 - C. purchasing-power parity.
 - D. a constant world interest rate.
15. If net exports are positive, which of the following is false?
- A. Domestic output exceeds domestic spending.
 - B. Domestic saving exceeds domestic investment.
 - C. Net capital outflow is positive.
 - D. There is a balance of trade deficit.
-

Practice Exam Questions

Econ 300

Dec. 11, 2000

When using the AD/IA model, be sure to provide supporting explanation for movements in or along the AD curve, i.e. use the IS/MP to motivate your arguments.

Essay

1. Using the AD/IA model, explain what happens if the central bank reinflates the economy. Suppose the target inflation rate is changed from 2 percent to 5 percent. What is the impact on the major components of spending in the short run and in the long run?

2. Suppose the economy begins at potential GDP with an inflation rate of 2 percent. Illustrate this situation in an AD/IA model. Suppose that an oil price shock drives inflation up to 5 percent in the short run, but the central bank expects this inflation shock to be temporary. In other words, the FED thinks the inflation adjustment curve will shift back down to 2 percent next year. (Assume that the inflation adjustment curve does actually shift back to its original level the year after the oil price shock).

a. If the FED maintains its original policy rule, i.e. doesn't change the parameters in the MP curve, where will real GDP be in the short run? How does the economy adjust back to its LR equilibrium at potential GDP?

b. Suppose instead that the FED decides to hold the real interest rate constant. What happens to real GDP? What does the long run adjustment back to potential GDP look like in this case?

c. Suppose that this scenario describes the US economy in 2001. Which policy path should the FED follow?

Midterm Exam
Econ 300
October 26, 2000

KEY

Answer the following essay questions in three to four blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay 80 points

1. In the general equilibrium model of chapter 3, Mankiw assumes that consumption is a function of disposable income alone: $C = C[Y-T]$. Modify the consumption function to make consumption depend on both after tax income and the level of real money balances (M/P) consumers hold (The assumption is that real balances are a part of wealth, and wealth affects how much we consume). Show that if money demand (the demand for real balances) depends on the nominal rate of interest, then an increase in the rate of money growth now affects consumption, investment, and the real interest rate.

2. a) What is the *steady state* in the Solow growth model? How is it reached from an initial situation in which the capital-labor ratio is below steady state?

b) Politicians often argue for policies they think will raise the U.S. national savings rate (s). According to the Solow model, should a low saving rate be a matter of national concern? What policies might be implemented to raise it?

Short Answer 20 points (one blue book page)

1. The US government announced on Tuesday Oct. 24, 2000 that the federal government had a \$237 billion budget surplus for the fiscal year that ended in September. It is the third consecutive year that the federal government has had a surplus after almost 30 years of running budget deficits. During the 1980s, the US government budget deficits reached record levels, as did the US trade deficits

Explain how the large budget deficits of the 1980s led to large US *trade deficit*. If the US is now running a budget surplus, provide (and explain) at least two possible reasons that the US *trade deficit* is at record levels rather than declining with the growing budget surplus.

Bonham Final Exam

Econ 300 December 14, 1999

Essay 80 points (three to five blue book pages)

Be sure to make full use of graphs, equations, and thorough written explanation to answer the following two questions.

1. The Fed is considering two alternative monetary policies:

- a) holding the money supply constant and letting the interest rate adjust, or
- b. adjusting the money supply to hold the interest rate constant.

In an IS-LM model, which policy will better stabilize output under the following conditions?

- a. (20 points) All shocks to the economy arise from exogenous changes in the demand for goods and services –i.e. the aggregate demand curve shifts due to changes in something that affects the IS curve such as consumer confidence.
- b. (20 points) All shocks to the economy arise from exogenous changes in the demand for money–i.e. the aggregate demand curve is shifting because of shifts in money demand.
1. Consider an economy with a government controlled (exogenous) saving rate (s), exogenous population growth (n), a fixed depreciation rate (d), but no technical progress ($g=0$). Suppose this economy is at steady state and has a relatively low saving rate so that its steady state capital labor ratio is below its golden rule capital labor ratio.
 - a. (10 points) Write down the fundamental equation of growth (capital accumulation equation), draw a graph of its major components to illustrate the concept of steady state. On your graph, show the golden rule capital labor ratio.
 - b. (10 points) Fully explain the economic intuition behind the stability of steady state. Explain the advantages of maintaining a capital labor ratio at the golden rule level.
 - c. (15 points) Suppose the government increased the saving rate to ensure enough investment to maintain the golden rule capital labor ratio as a steady state. Using graphs and written explanation, describe the transition of the economy from its initial steady state to the golden rule with the new higher saving rate. What happens to consumption and income per person (in levels and growth rates) in the transition period and in the new steady state. Are the growth rates of consumption and income per worker different in the two steady states?
 - d. (5 points)Why might a benevolent government choose not to implement such a policy?

Short Answer 20 points (choose one)

1. Explain the roles of monetary and fiscal policy in causing and ending hyperinflations.
 2. Why does the aggregate demand curve slope downwards? Explain.
-

Bonham Midterm Exam

Econ 300 October 19, 1999

Essay 50 points each (three to five blue book pages)

1. When the government subsidizes investment, such as with an investment tax credit, the subsidy often applies to only some types of investment. This question asks you to consider the effect of such a change. Suppose there are two types of investment in the economy: business investment and residential investment. In addition, suppose that the government institutes an investment tax credit that applies only to business investment.
 - a. How does this policy affect the demand curve for business investment? The demand curve for residential investment?
 - b. Draw the economy's supply and demand for loanable funds graph. How does this policy affect the supply of and demand for loans? What happens to the equilibrium interest rate?
 - c. Compare the old and the new equilibrium. How does this policy affect the total quantity of investment? The quantity of residential investment?
 1. Consider an economy with a government controlled (exogenous) saving rate (s), exogenous population growth (n), a fixed depreciation rate (d), but no technical progress ($g=0$). Suppose this economy is at steady state and has a relatively low saving rate so that its steady state capital labor ratio is below its golden rule capital labor ratio.
 - a. Write down the fundamental equation of growth (capital accumulation equation), draw a graph of its major components to illustrate the concept of steady state. On your graph, show the golden rule capital labor ratio.
 - b. Fully explain the economic intuition behind the stability of steady state. Explain the advantages of maintaining a capital labor ratio at the golden rule level.
 - c. Suppose the government increased the saving rate to ensure enough investment to maintain the golden rule capital labor ratio as a steady state. Using graphs and written explanation, describe the transition of the economy from its initial steady state to the golden rule with the new higher saving rate. What happens to consumption and income per person (in levels and growth rates) in the transition period and in the new steady state. Are the growth rates of consumption and income per worker different in the two steady states?
 - d. Why might a benevolent government choose not to implement such a policy?
-

Bonham Midterm Exam

Econ 300 October 15, 1998

Essay 80 points (three to five blue book pages)

1. In the general equilibrium model of chapter 3, Mankiw assumes that consumption is a function of disposable income alone: $C = C(Y-T)$. Modify the consumption function to make consumption depend on both after tax income and the real interest rate. Provide an explanation for why the real rate of interest might affect real consumption expenditures. Using your modified consumption function, find an expression for national savings, and illustrate graphically the supply and demand for loanable

funds equilibrium condition. Show (and explain) the impact of an increase in taxes on: the real rate of interest, national savings, investment, and the government budget deficit.

2. The amount of education the typical person receives varies substantially among countries. Suppose you were to compare a country with a highly educated labor force and a country with a less educated labor force. Assume that the countries are otherwise the same: they have the same saving rate, depreciation rate, population growth rate, rate of technical progress, and they initially have the same sized labor forces. If both countries are in steady state, what would you predict for the following variables in each country? (Be sure to illustrate your answer graphically and explain your results):

- a) The rate of growth of total income.
- b) The rate of growth of income per worker.
- c) The rate of growth of consumption per worker.
- d) The real rental price of capital?

Short Answer 20 points (choose one, answer in one to two paragraphs each)

1. The 1983 *Economic Report of the President* contained the following statement: "Devoting a larger share of national output to investment would help restore rapid productivity growth and rising living standards." Do you agree with this claim? Explain

2. What makes the demand for the economy's output of goods and services equal the supply? Explain.

Bonham
Final Exam
Econ 300
December 16, 1997

Essay 80 points (three to five blue book pages)

Be sure to make full use of graphs, equations, and thorough written explanation to answer the following two questions.

1. Many of the South East Asian economies currently experiencing financial crises have run substantial national government deficits over the past 3-5 years. Simultaneously, their monetary authorities have allowed excessive money growth, and therefore these economies have also experienced high rates of inflation (eg. Korea's 7% average inflation rate from 1990-1996). As part of the IMF bailout program, Thailand, Indonesia, and South Korea will be required to cut their deficit spending (lower government spending and or raise taxes), and reduce their rate of inflation by slowing money growth (reduce M-primarily due to bank closures).

Using a Short Run macro model (IS-LM, Aggregate S/D) explain the impact of the IMF prescription on real output, employment, the general price level, and real interest rates.

As time passes and wages and prices adjust, what will be the impact of the IMF prescription on real output, employment, and the general price level?

2. A major goal of the IMF bail out package is to stabilize the currencies of the SE Asian economies.

Assume that South Korea is a small open economy. Taking a more long run view, what effect will the IMF policy prescription have on the value of the Won (the SK currency) relative to the dollar, and on the South Korean trade deficit?

Short Answer 20 points (choose one)

1. True or false? The higher the steady-state capital-labor ratio is, the more consumption each worker can enjoy in the long run. Explain your answer.
2. Explain the sticky wage and imperfect information theories of aggregate supply. On what market imperfection do these theories rely?

Bonham
Midterm Exam

Econ 300
October 28, 1997

Essay 80 points (three to five blue book pages)

1. In the general equilibrium model of chapter 3, Mankiw assumes that consumption is a function of disposable income alone: $C = C(Y-T)$. Modify the consumption function to make consumption depend on both after tax income and the level of real money balances (M/P) consumers hold (The assumption is that real balances are a part of wealth, and wealth affects how much we consume). Show that if money demand (the demand for real balances) depends on the nominal rate of interest, then an increase in the rate of money growth now affects consumption, investment, and the real interest rate.
2. Many demographers predict that the US will have zero population growth in the twenty-first century, in contrast to average population growth of about one percent per year in the twentieth century. Use the Solow model to forecast the effect of this slowdown in population growth on the growth of total output and the growth of output per person. Consider the effects both in steady state and in the transition between steady states.

Short Answer 20 points (one to two paragraphs each)

1. True or false? The higher the steady-state capital-labor ratio is, the more consumption each worker

can enjoy in the long run. Explain your answer.

2. Explain the slopes of the saving and investment curves in real interest rate and S,I space. Give two examples of changes that would shift the saving curve to the right and two examples of changes that would shift the investment curve to the right.

Bonham Midterm Exam
Econ 300 October 28, 1993

Essay 80 points (three to five blue book pages)

Suppose that the countries of the European Community (UK, Germany, France, Italy, etc.) stop all government subsidies for investment and eliminate all investment tax credits.

1. Fully explain the immediate impact of such a change on the following variables: world real interest rates; U.S. real interest rates; investment in the U.S.; the current and capital accounts in the U.S.; and the real and nominal exchange rate measured as Rest of World Currency per U.S. dollar.
2. Explain the dynamic effects of such a change on the U.S. economy. What happens to real output growth and the level of real output in the long run? Why does real output change if there is no change in national saving?

Short Answer 20 points (one blue book page)

1. Robert Reich recently suggested that the U.S. raise its minimum wage from \$4.25 per hour to \$4.75 per hour. Others in the Clinton administration have suggested that the minimum wage be increased to \$6.00 per hour. Briefly discuss the advantages and disadvantages of such a policy.
 2. Write down the quantity equation and explain it. What does the assumption of constant velocity imply about the inflation rate?
-

Bonham Final Exam
Econ 300 Dec 14, 1993

Essays 60 points.

*Each of these questions requires the use of graphs, equations, and verbal explanation. Your answer to each question should be **three to five blue book pages** long.*

1. An article in the Washington Post, dated August 4, 1990, stated that "[o]il prices continued to surge

yesterday in the wake of the Iraqi invasion of Kuwait, jarring world financial markets and increasing the danger that the U.S. economy will drop into a recession. That danger was underscored yesterday by a Labor Department report that the nation's civilian unemployment rate rose from 5.2 percent to 5.5 percent last month, ... Crude oil prices took another jump of \$1.50 to \$2 a barrel, ..., [t]hat would translate into a 15 cent-per-gallon increase in gasoline prices at the pump, and similar increases in home heating oil prices, feeding a powerful current of inflation into the economy.

Using an IS-LM model, AD-AS model, and a Phillips curve, explain the impact of an increase in oil prices on the U.S. economy. Analyze the short run impact on real output, employment, prices, and real interest rates. Be sure to explain how it is possible to have an increase in the rate of unemployment while simultaneously experiencing an increase in inflation. Suppose that this increase in oil prices was permanent. What are the long run effects on the economy?

Short Answer 20 points each.

You should answer these questions in one to two blue book pages, using graphs and equations if you desire.

1. From 1929 to 1933, the nominal money supply in the U.S. fell 25%, and the unemployment rate rose from 3.2% to 25.2%. At the same time, the price level fell approximately 25%, and nominal interest rates declined continually. Are these data consistent with the hypothesis that contractionary monetary policy caused the Great Depression? Explain.
 2. If Germany has low inflation and Italy has high inflation, what will happen to the exchange rate between the German mark and the Italian Lira?
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Bonham Midterm Exam
Econ 300 March 17, 1994

Essay 80 points (three to five blue book pages)

1. In the general equilibrium model of chapter 3, Mankiw assumes that consumption is a function of disposable income alone: $C = C(Y-T)$. Modify the consumption function to make consumption depend on both after tax income and the level of real money balances (M/P) consumers hold (The assumption is that real balances are a part of wealth, and wealth affects how much we consume). Show that if money demand (the demand for real balances) depends on the nominal rate of interest, then an increase in the rate of money growth now affects consumption, investment, and the real interest rate.
2. Write down the fundamental equation of growth from the Solow model. Explain how the saving rate and the rate of population growth affect the steady-state level of income, and the steady-state rate of growth. What determines the steady-state rate of growth of income per worker? Does the Solow model fully explain the factors that determine steady-state growth in income per worker?

Short Answer 20 points (one to two paragraphs each)

The newspaper reports that the nominal interest rate is 12 percent per year in Canada and 8 percent per year in the United States. However, arbitrage ensures that the real rates of interest in the two countries are equal.

1. Using the Fisher equation, what can you infer about expected inflation in Canada and the United States.
 2. Assuming purchasing power parity holds, what can you infer about the expected change in the exchange rate between the Canadian dollar and the U.S. dollar?
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Bonham Final Exam
Econ 300 Fall 94

60 points (three to five blue book pages)

1. Suppose that the government wants to raise investment but keep output constant. In the IS-LM model, what mix of monetary and fiscal policy will achieve this goal? How will the effects of this policy show up in the AD-AS model?

In the 1980s, the U.S. government cut taxes and ran a budget deficit while the Fed pursued tight monetary policy. What effect should this policy mix have?

Note that the above (second) policy mix has no effect on the LRAS curve in the static (AD-AS) model. Explain how these policies would affect the growth of output using a dynamic model. Explain how the different assumptions made in the long run static model versus the long run dynamic (neoclassical growth) model account for their different results for real output.

40 points (2 to 4 blue book pages)

2. The U.S. 1981 tax act reduced tax revenues to the federal government. Explain the effect of such a change on the U.S. Federal Government budget deficit, the U.S. trade deficit, capital account, and the real and nominal exchange rate measured as Rest of World Currency per U.S. dollar.