Econ 102, Winter 2006
Final Exam - Answers

Questions 1-2 use the data in the table below. Suppose there is a small economy. In this economy, there are 3 goods produced in 2000, 4 goods produced in 2001, and 5 goods produced in 2002 and 2003. The CPI consumption basket contains only three goods: Bottled water (50), TV sets (10) and CD players (5). Look at the following table for details of output and prices in each of the four years.

	2000		2001		2002		2003	
	Quantities	Prices	Quantities	Prices	Quantities	Prices	Quantities	Prices
Bottled water	100	$0.50	150	$0.40	200	$0.60	250	$0.66
TV sets	10	$200	20	$300	30	$350	40	$385
CD players	5	$50	6	$60	7	$70	6	$77
Bicycles	-	-	10	$90	10	$100	10	$110
Air conditioners	-	-	-	-	2	$250	4	$275

1. What is the inflation rate between 2001 and 2002 in terms of the CPI?

   a) 16.9%
   b) 18%
   c) 21%
   d) 15.9%
   e) 14.5%

2. Using 2002 as the base year, what is the inflation rate from 2002 to 2003 in terms of the GDP deflator? (Look at the numbers, and think, before spending too much time on this.)

   a) 6%
   b) 7%
   c) 10%
   d) 25%
   e) 35%

3. According to the “catch-up effect,”

a) Goods whose prices are low tend to have higher than average rates of inflation
b) Countries that start off poor tend to grow more rapidly than countries that start off rich
c) An expansion of commercial bank reserves leads to increased lending as banks seek to restore their desired ratios of reserves to deposits
d) A monetary expansion leads to only a small price increase in the short run, but prices then rise further in the long run
e) An increase in the price level reduces real wealth, causing consumers to save more

4. Suppose that **all** of the following increase by 10%: technology, labor, capital, human capital, and natural resources. What will happen to productivity as a result?

a) It will fall by 10%
b) It will fall, by somewhere between zero and 10%
c) It will remain unchanged
d) It will rise by 10%
e) It will rise by 50%

5. You are trying to decide whether to imitate your friends by buying a $60,000 BMW – a car that is manufactured and sold in Germany. You don’t really need one, since you already have a perfectly acceptable car that you will keep even if you buy the BMW, but you think it will look nice sitting in the street outside your student apartment. And you (or your parents) have enough money that buying it won’t cause you to cut back on any other expenses. However, you wonder (of course!) about the effect of your purchase on US GDP. Assuming that no other transactions in the US are affected by your purchase, and that it would indeed somehow get recorded in the national accounts, what would be the effect of your purchase on US GDP?

a) There is no effect on US GDP
b) US GDP rises by less than $60,000
c) US GDP rises by exactly $60,000
d) US GDP falls by less than $60,000
e) US GDP falls by exactly $60,000

6. According to the closed economy loanable funds model, what is the impact of a simultaneous decrease in government expenditure and taxes (by equal amounts)?

a) Both national saving and investment stay the same
b) National saving and investment both decrease by the same amount as the tax decrease
c) National saving and investment both increase by the same amount as the tax decrease
d) National saving and investment both decrease by more than the amount of the tax decrease
e) National saving and investment both increase by less than the amount of the tax decrease

7. Nadia has just won the Slovakian national lottery and would like to move to Hollywood to live like the stars. She has the option of receiving a payment of 10 Million Koruna (the currency of Slovakia) today or receiving a payment of 5 Million Koruna today and 6 Million Koruna a year from today. She is indifferent!

What must be the prevailing interest rate in Slovakia if Nadia only cares about present discounted value?

a) 10 percent
b) 16 2/3 percent
c) 20 percent
d) 23 1/3 percent
e) None of the above

8. Which of the following is CORRECT?

a) Discouraged workers are people who are frustrated by the jobs they have had, so they would rather collect unemployment insurance
b) Cyclical unemployment cannot be higher than the natural unemployment rate
c) A law that imposes a permanently higher minimum wage (assuming it is higher than the equilibrium wage level) will increase the natural rate of unemployment
d) An increase in the price level, with no adjustment in nominal wages, will increase the real wage
e) None of the above

9. You are given the following information about the labor market--

Population: 26 million
Adult population: 18 million
Number employed: 14 million
Number unemployed: 1million
Adult population able to work: 17.9 million
Adult population able and willing to work: 17.5 million

Based on this information, which of the following is INCORRECT?

a) The unemployment rate is lower than the labor force participation rate
b) The number of discouraged workers is 2.5 million
c) If the natural unemployment rate is 5%, then the cyclical unemployment rate is 1.7%
d) The labor force measures 17.9 million
e) None of the above

10. Suppose the Fed's required reserve ratio is 8%, and the commercial banking system has $5 million of deposits and holds no excess reserves. If the required reserve ratio is increased to 10% and banks still do not want to hold any excess reserves and *non-banks hold no cash*, then banks will initially recall loans of ______, and the higher reserve requirement will lead to an eventual decrease in the money supply by _____.

a) $100,000; $1 million
b) $1.25 million; $12.5 million
c) $125,000; $ 1.25 million
d) $1.25 million; $1 million
e) $125,000; $1 million

11. Suppose the Federal Reserve Bank sells more bonds to the public through open market operations. According to the quantity theory of money, this policy will cause a proportionate ________ in the long run.

a) Decrease in Nominal GDP
b) Increase in Nominal GDP
c) Decrease in Real GDP
d) Increase in Real GDP
e) None of the above

12. Suppose the velocity of money is constant. The growth rate of the money supply is constant at 10% every year. The price level in Year 0 is 50, while the price level in Year 1 is 54. According to the Quantity Theory of Money, what is the growth rate of Real GDP from Year 0 to Year 1?

a) 2%
b) 8%
c) 10%
d) 5%
e) 20%

13. Suppose the exchange rate is 40 Indian Rupees per U.S. dollar. A dozen eggs costs $1.50 if purchased in the U.S. while a dozen eggs costs 80 Rupees in India. Under the assumption that there is no transportation cost, what is the real exchange rate from the US perspective, in terms of eggs, and how can arbitragers make a profit?

a) Greater than one; arbitragers could profit by buying eggs in the U.S. and selling them in India
b) Greater than one; arbitragers could profit by buying eggs in India and selling them in the U.S.
c) Less than one; arbitragers could profit by buying eggs in the U.S and selling them in India
d) Less than one; arbitragers could profit by buying eggs in India and selling them in the U.S
e) Equal to one; arbitragers can not make profit by shipping eggs between these two countries.

14. Assume that purchasing power parity (PPP) holds and continues to hold over time. Assuming that in the long run the U.S. price level rises more slowly than the price level abroad, which of the following is correct?

a) The nominal value of the US Dollar will appreciate
b) The nominal value of the US Dollar will depreciate
c) Money supply must increase in proportion to the price level
d) Foreign goods and services will become cheaper relative to U.S. output
e) Foreign goods and services will become more expensive relative to U.S. output

15. According to the long-run open economy model from class, what is the impact on the real interest rate, r, and the real exchange rate, E, due to an increase in the government deficit?

a) r will decrease; E will decrease; the dollar's purchasing power is decreasing
b) r will decrease; E will increase; the dollar's purchasing power is increasing
c) r will decrease; E will decrease; the dollar's purchasing power is increasing
d) r will increase; E will increase; the dollar's purchasing power is increasing
e) r will increase; E will decrease; the dollar's purchasing power is decreasing

16. Suppose the stabilization of government institutions in Slovakia increases *everyone's* demand for Slovakian government bonds at any given interest rate. According to the long-run open economy model from class, what is the impact of this change on Slovakia's domestic investment and trade deficit?

a) Domestic investment increases; trade deficit decreases
b) Domestic investment increases; trade deficit increases
c) Domestic investment decreases; trade deficit decreases
d) Domestic investment decreases; trade deficit increases
e) None of the above

17. According to the AS-AD model from class, and assuming that investment depends only on the real interest rate, what will happen to investment if the government reduces income taxes while holding government expenditure constant?

a) Fall in the long run but not in the short run
b) Fall in the short run but rise back to its initial level in the long run
c) Fall in the short run and remain below its initial level in the long run
d) Rise in the short run but fall below its initial level in the long run
e) Fall in the short run but rise above its initial level in the long run

18. The citizens of Slovakia have perfect foresight with respect to inflation, and all firms can change wages and output prices instantaneously (without incurring a fixed cost). Which of the following would induce a short-run reduction in unemployment?

a) An increase in the money supply
b) An increase in government spending
c) An increase in consumer confidence
d) All of the above
e) None of the above

19. Letting Y = real GDP, Y_N = the natural rate of output, P = the actual price level, and P_E = the expected price level, which of the following equations could be a correct representation of the Short Run Aggregate Supply Curve?

a) $Y = Y_N - 7(P_E - P)$
b) $Y = Y_N + 7(P + P_E)$
c) $Y = Y_N - 7(P - P_E)$
d) $Y = Y_N - 7(P + P_E)$
e) $Y = -Y_N + 7(P_E - P)$

20. Which of the following would shift the Short Run Aggregate Supply Curve (SRAS) but **not** the Long Run Aggregate Supply Curve (LRAS)?

a) A fall in the natural rate of unemployment
b) A decrease in the expected price level
c) An advance in technological knowledge
d) An increase in the human capital stock of the country
e) A decrease in the availability of natural resources

21. Which of the following changes would shift the Aggregate Demand curve to the left?

a) A fall in saving
b) A rise in investment
c) A rise in the price level
d) A fall in real GDP
e) A rise in the reserve requirement

22. Which of the following COULD explain a short run decrease in unemployment with no change in the price level?

a) An increase in consumer confidence
b) An increase in government spending combined with a decrease in investment tax credit to firms
c) A decrease in the Fed's discount rate combined with a decrease in world input prices
d) An increase in both consumer confidence and investment
e) None of the above

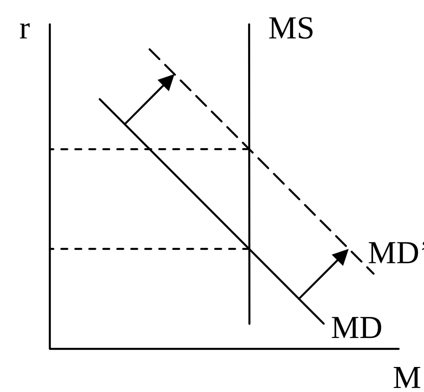
23. According to the AS-AD model, an increase in oil prices will imply a _______ change in real GDP and a ________ change in nominal GDP in the short run.

a) Positive; ambiguous
b) Positive; zero
c) Ambiguous; positive
d) Negative; negative
e) Negative; ambiguous

24. Suppose individuals increase their desire to save in an AS-AD economy. This will cause which of the following short run outcomes?

a) The real interest rate will rise
b) The nominal interest rate will rise
c) The inflation rate will rise
d) The real interest rate will fall
e) None of the above

25. The graph on the right shows a change that might occur in the short-run money market. Which of the following could this represent?



a) An open market purchase of bonds by the central bank
b) A rise in the price level.
c) An increase in saving
d) A fall in real GDP
e) The installation of a larger number of automatic teller machines

26. How do the President and/or Congress set monetary policy in the United States?

a) The President instructs the Secretary of the Treasury to print more or less money
b) Congress controls the budget deficit, which is financed by printing money
c) The President sets priorities for the Federal Reserve System and will fire its Board of Governors if they do not follow them
d) Committees of the House and Senate regularly bring in the Chairman of the Fed and give him instructions
e) They don't; the Fed is independent of both the President and Congress

27. Suppose that firms make their investment decisions without considering the interest rate and that consumers have a marginal propensity to consume of 0.5. What is the size of the horizontal shift in Aggregate Demand in the event of a $50 million increase in government expenditure?

a) $25 million
b) $50 million
c) Greater than $50 million, but less than $100 million
d) $ 100 million
e) Greater than $100 million

28. The government decides to increase social security payments to retirees. Which of the following is correct?

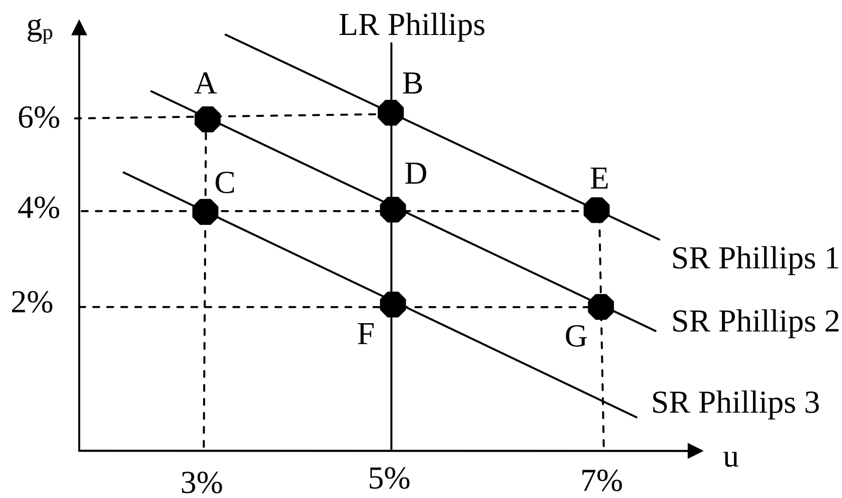
I. Consumption Rises
II. Investment Rises
III. Government Purchases rises

a) I only
b) III only
c) I, III
d) II, III
e) I, II, III

29. Congress passes a bill to cut income taxes, with an expected decrease in tax revenue of $20 million. In the new short-run equilibrium, which of the following must be correct?

a) Consumption rises by $20 million
b) Government purchases fall by $20 million
c) Investment falls
d) All of the above
e) None of the above

Using the following Phillips curves, answer questions 30 and 31:



30. Which of the following is the correct description of point C?

a) Actual inflation is 4%, Expected inflation is 3%
b) Actual inflation is 2%, Expected inflation is 2%
c) Actual inflation is 4%, Expected inflation is 2%
d) Actual inflation is 2%, Expected inflation is 4%
e) Actual inflation is 4%, Expected inflation is 4%

31. Suppose the economy starts out in long run equilibrium at point D. Further suppose that consumers and firms in this economy do not have rational expectations. If the Fed were to implement contractionary monetary policy, permanently reducing the rate of growth of the money supply, the economy would move from point D to point _____, output would _____ in the short run, and the economy would eventually settle into the long run equilibrium at point _____.

a) G; decrease; F
b) C; increase; F
c) A; increase; B
d) B; decrease; D
e) E; decrease; D

32. During the “Volcker Disinflation,”

a) Price controls were used to keep prices from rising
b) Expectations of inflation were reduced by promoting the slogan, “Whip Inflation Now”
c) The price level fell for the first time since the Great Depression
d) The unemployment rate was kept above the natural rate of unemployment
e) The effort to reduce inflation resulted instead in higher unemployment and no reduction in inflation

33. Suppose that the natural rate of output is 5,000,000 and that reducing output to 4,900,000 and maintaining that level for 4 years would reduce the rate of inflation from 8% to 6%. What, then, is the sacrifice ratio?

a) 1
b) 2
c) 4
d) 5
e) 8

34. In the long run, the Phillips Curve is

a) Flat, because monetary neutrality makes monetary policy ineffective in fighting inflation
b) Downward sloping because tight labor markets produce accelerating inflation
c) Vertical because any unemployment rate other than the natural rate requires inflation different from expected inflation
d) Upward sloping because as more unemployed workers compete for jobs, they cause wages and prices to rise at a faster rate
e) Nonexistent, because the classical dichotomy separates real and nominal economic variables

35. Why, according to an assigned news article from the Wall Street Journal, might the Consumer Price Index say that the price of a good fell when it actually rose?

a) The government sometimes misstates prices in order to stimulate consumption.
b) For some products the government makes an adjustment for improvements in quality.
c) The CPI is not seasonally adjusted.
d) The CPI compares prices to what people expect them to be, not to what they actually are.
e) The CPI is a forecast of prices based on an economic model, rather than a measurement of actual prices.

36. The Wall Street Journal reported on the deliberations within the Fed in the year 2000. Why is that relevant for today?

a) Because monetary policies have their effects with a six year lag.
b) Because the monetary expansion that happened then stimulated a large investment in business equipment that is just now contributing to US productivity.
c) Because Ben Bernanke, who is now head of the Fed, was a member then, and his comments give clues to what he may do now.
d) Because the Fed faced an economic situation then that may turn out to be similar to what it faces today.
e) Because that was the last time the Fed was not controlled by the President, since he was replaced by a Republican in 2001.

37. According to the assigned news article about US median net worth in 2001-2004, the difference between ____________ of the median US household rose ____________ in that period than it did in 1998-2001.

a) Income received and taxes paid; more
b) Assets and liabilities; more
c) Profits and wages; more
d) Income received and taxes paid; less
e) Assets and liabilities; less

38. Why, according to the assigned article by Hassett on inflation targeting, is inflation targeting needed more today than it was in the 1970s?

a) Inflation is higher today than it was then.
b) In the 1970s, the Fed was controlled directly by Congress, which debated monetary policy publicly.
c) Because inflation was high in the 1970s, everyone knew what direction the Fed wanted to move, while with today's lower inflation that is not the case.
d) In the 1970s, the public cared more about unemployment than it cared about inflation.
e) Ben Bernanke, the new Chairman of the Fed who favors inflation targeting, was not important in the 1970s, so it was not necessary to pursue his favored policies.

39. According to the assigned reading by Aaron and Hacker, alcohol was subject to "stealth tax cuts" in the United States. How did this happen?

a) George W. Bush lobbied for these tax cuts before he gave up drinking.
b) Alcohol taxes as a percent of price are still just as high as they used to be, but because other taxes have risen their importance is reduced.
c) The public has substituted away from high-taxed hard liquor toward low-taxed beer.
d) Taxes are fixed in dollars and have fallen as percentage of price as prices have risen.
e) The liquor lobby in Washington persuaded Congress to attach tax cuts to legislation where they would not be noticed.

Part II: Short Answer

Short Answer Question #1 (10 points):

The Government of Slovakia recently issued a 30 year bond which it sold to the United States government. The coupon payments on the bond are 100 Koruna (the Slovakian currency) per year. The nominal exchange rate is currently at 10 Koruna per US Dollar. The CPI in Slovakia is currently at 100.

Just last week, a military junta led by a group of discouraged workers took over the government of Slovakia. They intend to renege on the government bond issued by the previous regime, but they cannot simply stop making payments. They have however gained control of the money printing machine, so they can influence the money supply. They are therefore expanding the money supply to three times its previous size.

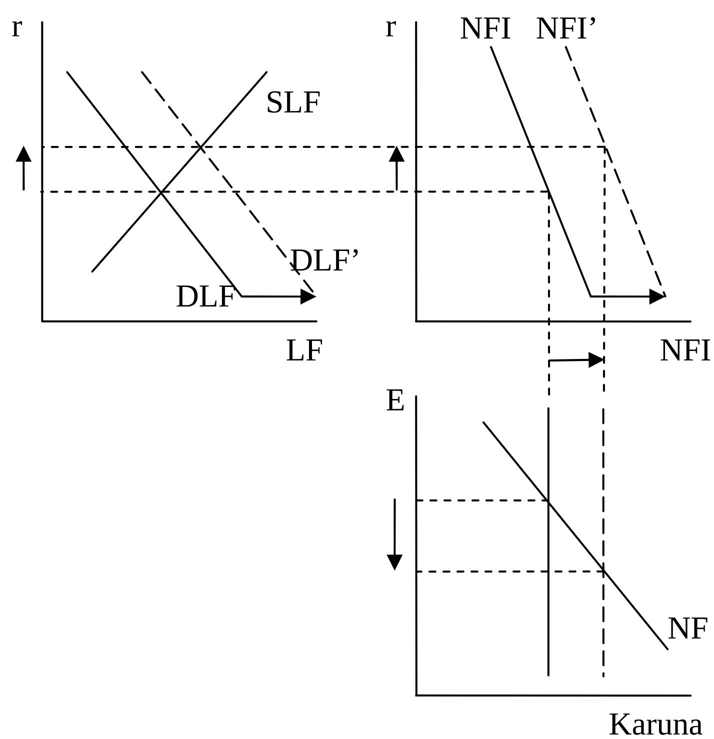
a) Assuming Purchasing Power Parity, constant velocity of money, a constant price level in the United States and a vertical SRAS curve (in other words, the long-run model but with PPP), what will be the percent decrease in the REAL value of the coupon payments received by the US government?

The 200% increase in M will result in a 200% increase in domestic price. This means the CPI will go from 100 to 300. The nominal exchange rate will go from 1/10 to 1/30; that is, the nominal value of the Koruna will fall to one-third what it was before. This, in turn, means that the real value of the debt will go from $10 per coupon to $3.33 per coupon. So the value will decrease by two-thirds, or 66.66%.

b) For this part, assume instead that Purchasing Power Parity does not hold. Using the open economy (long-run) model, analyze what would happen to the real exchange rate in Slovakia as a result of the actions of the military junta? Hint: Think about the level of capital inflow into Slovakia at any given domestic interest rate.

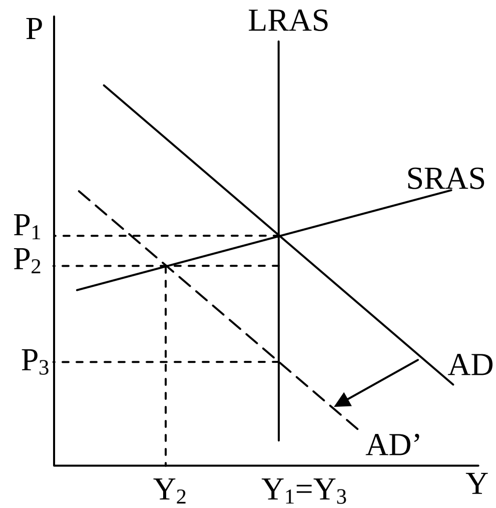
The change in the money supply will not itself have any real effects in this long-run model, as we know from monetary neutrality. However, as we saw in part (a), those from abroad who had previously lent to Slovakia were hurt by the junta's policy, and this seems likely to make them and others leery of any further purchases of Slovakian bonds. This does affect international capital flows.

Foreigners will now view any investment into Slovakia as risky, since its value can be undermined by the junta's actions, and this therefore creates capital flight out of the country. As usual in the open-economy model, this appears as a rightward shift of both the DLF and NFI curves, as shown here, and this will in turn cause depreciation of the equilibrium real exchange rate.



Short Answer Question #2 (10 points):

The diagram at the right shows, as sold lines, the aggregate supply and demand curves of an economy that starts in long-run equilibrium at a GDP of Y_1 and a price level of P_1.



a. Label the curves

b. The downward-sloping curve now shifts to the left, to the dashed line shown. Circle each of the following changes that could have caused this shift.

   A rise in oil prices

   A rise in saving

   A fall in taxes

   An improvement in technology

c. Find in the diagram what the price level and GDP will be in the short run as a result of this shift, and label them Y_2 and P_2.

d. If policy makers take no further action, where will the economy go in the long run? Label the long-run levels of GDP, Y_3, and price, P_3.

e. If you were advising the central bank in this situation, what would you advise it to do when it first became aware that the shift in part (b) had occurred, and why? (Write your answer in the space below.)

   It can expand the money supply by using open market purchases of bonds. This will shift the AD curve back to the right and return Y to Y_1 more quickly than if they wait for the adjustment to long-run equilibrium along AD'.