

Assignment 5

Deadline: July 28, 2005

Part A Multiple-Choice Questions

1. A reserve ratio of 0.10 means that a bank loans out _____ percent of its _____.
A) 10; deposit liabilities.
B) 10; excess reserves.
C) 90; deposit liabilities.
D) 90; excess reserves.

2. A bank has a desired reserve ratio of 0.10. If it has demand deposits of \$100,000 and is holding \$12,000 in reserves:
A) all the bank's reserves are excess reserves.
B) the bank is not meeting its desired reserve ratio.
C) the bank is holding \$2,000 in excess reserves.
D) all reserves are required reserves.

Assets		Liabilities and Net Worth	
Total Reserves	\$100,000	Demand Deposits	\$100,000

3. The table above represents a bank's T-account. If the reserve ratio is 10 percent, how much can this bank lend out?
A) \$ 10,000.
B) \$ 90,000.
C) \$100,000.
D) \$900,000.

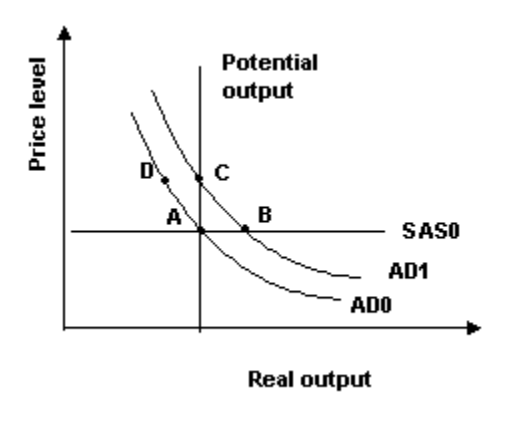
4. The table above represents a bank's T-account. Suppose it is the only bank in town and individuals in town hold no cash. Assuming the reserve ratio is 10 percent, what will be the bank's deposits and reserves at the end of the money creation process?
- A) Deposits will equal \$100,000 and reserves will equal \$10,000
 - B) Both deposits and reserves will equal \$100,000.
 - C) Deposits will equal \$1,000,000 and reserves will equal \$100,000.
 - D) Both deposits and reserves will equal \$1,000,000.
5. The table above represents a bank's T-account. Suppose it is the only bank in town and individuals in town hold no cash. Assuming the reserve ratio is 10 percent, what will be the bank's loans at the end of the money creation process?
- A) \$90,000
 - B) \$100,000.
 - C) \$900,000.
 - D) \$1,000,000.
6. Assuming individuals hold no cash, the desired reserve ratio is 20 percent, and banks keep no excess reserves, an initial inflow of \$100 into the banking system will cause an increase in the money supply of:
- A) \$20.
 - B) \$50.
 - C) \$100.
 - D) \$500.
7. If banks hold excess reserves whereas before they did not, the money multiplier:
- A) will become larger.
 - B) will become smaller.
 - C) will be unaffected.
 - D) might increase or might decrease.
8. In the SAS/AD model (when prices are fixed), monetary policy has the *greatest* effect on *real output* when:
- A) both the AD and SAS curves shift.
 - B) only the AD curve shifts.
 - C) only the SAS curve shifts.
 - D) neither the SAS nor the AD curves shift.

9. A monetary policy that affects nominal income but *not* real income must result in the shift of:
- A) both the AD and SAS curves.
 - B) only the AD curve.
 - C) only the SAS curve.
 - D) neither the SAS curve nor the AD curve.
10. If prices are perfectly flexible, monetary policy:
- A) affects both nominal and real income.
 - B) affects real income but not nominal income.
 - C) affects nominal income but not real income.
 - D) doesn't affect real or nominal income.
11. If the economy is in the Keynesian range, an expansionary monetary policy:
- A) increases both nominal and real income.
 - B) increases real income but not nominal income.
 - C) increases nominal income but not real income.
 - D) doesn't increase real or nominal income.
12. If the economy is in the Classical range, a contractionary monetary policy:
- A) decreases both nominal and real income.
 - B) decreases real income but not nominal income.
 - C) decreases nominal income but not real income.
 - D) doesn't decrease real or nominal income.
13. If a contractionary monetary policy reduces nominal income but not real income, it must be true that prices:
- A) are perfectly flexible.
 - B) are at least partially flexible.
 - C) are completely inflexible.
 - D) have not fully adjusted to the change in aggregate demand.
14. If a contractionary monetary policy reduces nominal income by the same amount as real income, it must be true that prices:
- A) are perfectly flexible.
 - B) are at least partially flexible.
 - C) are completely inflexible.
 - D) have fully adjusted to the change in aggregate demand.

15. If a contractionary monetary policy reduces nominal income by more than it reduces real income, it must be true that prices:
- A) are perfectly flexible.
 - B) are at least partially flexible.
 - C) are completely inflexible.
 - D) have fully adjusted to the change in aggregate demand.
16. If the money supply is 500 and velocity is 6, then nominal GDP:
- A) is 83.33.
 - B) is 500.
 - C) is 3000.
 - D) cannot be determined.
17. The inflation tax is:
- A) an implicit tax on the holders of cash and the holders of any obligations specified in real terms.
 - B) an implicit tax on the holders of cash and the holders of any obligations specified in nominal terms.
 - C) an explicit tax on wealth.
 - D) an explicit tax on consumption.
18. The institutionalist theory of inflation focuses on:
- A) on how firms determine wages and prices.
 - B) the equation of exchange.
 - C) the rate of growth in the money supply.
 - D) the institutions that determine how the money supply is determined.
19. In the insider/outsider model, inflation is caused by:
- A) a perpetual surplus of demand for goods caused by too high real wages by insiders.
 - B) a perpetual shortage of goods caused by too high real wages by insiders.
 - C) a perpetual increase in nominal wages as insiders attempt to maintain their real wage leading to a higher price level.
 - D) the perpetual bidding up of real wages and thus the price level as outsiders compete for jobs held by the insiders.

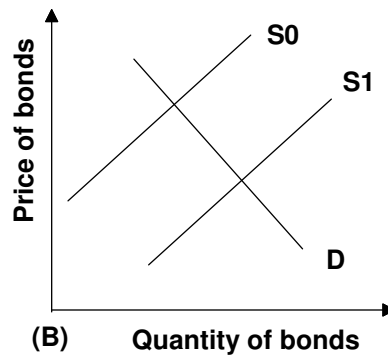
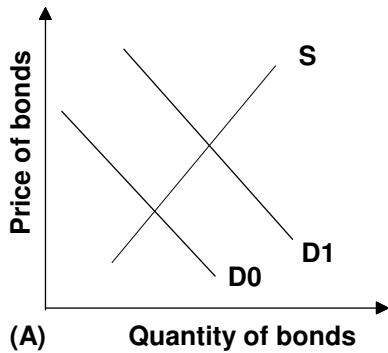
20. An incomes policy:
- A) guarantees a minimum level of income to every person.
 - B) is a laissez-faire approach.
 - C) places pressure on individuals and businesses to hold down their nominal wages and prices.
 - D) places pressure on individuals and businesses to increase productivity.
21. The short-run Phillips curve suggests that an increase in the rate of inflation will accompany:
- A) a decrease in the unemployment rate.
 - B) an increase in the unemployment rate.
 - C) an increase in expected inflation.
 - D) a decrease in expected inflation.
22. Empirical evidence suggested that in the 1960s there was:
- A) no predictable relationship between inflation rates and unemployment rates in the economy.
 - B) an unstable direct relationship between inflation rates and unemployment rates in the economy.
 - C) a stable inverse relationship between inflation rates and unemployment rates in the economy.
 - D) a stable direct relationship between inflation rates and unemployment rates in the economy.
23. Stagflation is the combination of:
- A) high and accelerating inflation and low unemployment.
 - B) high and accelerating inflation and high unemployment.
 - C) low and decelerating inflation and high unemployment.
 - D) low and decelerating inflation and low unemployment.
24. On the short-run Phillips curve the expectations of inflation:
- A) are rising.
 - B) are falling.
 - C) remain constant.
 - D) are rising or falling depending on how the economy is performing.

25. The long-run Phillips curve is:
- A) downward-sloping, implying a trade-off between unemployment and inflation.
 - B) downward-sloping, implying that the unemployment rate always returns to its natural rate in the long-run.
 - C) vertical, implying a long-run trade-off between unemployment and inflation.
 - D) vertical, implying that the unemployment rate always returns to its target rate in the long-run.



26. Refer to the graph above. Suppose the economy is initially at A but then the Bank of Canada adopts an expansionary monetary policy that shifts the AD curve to AD1. In the long run, this policy will cause the economy to move to point:
- A) A.
 - B) B.
 - C) C.
 - D) D.
27. The monetary base is comprised of
- A) currency held by the public.
 - B) vault cash.
 - C) chartered bank deposits at the Bank of Canada.
 - D) all of the above.
28. The Bank of Canada's policy tools include all of the following except:
- A) changes in the required reserve ratio.
 - B) changes in the target range for the overnight financing rate.
 - C) open market operations.
 - D) transferring of government deposits.

29. Suppose the desired reserve ratio is 20% and there are no cash holdings. A \$1 billion purchase of government securities by the Bank of Canada will:
- A) increase the potential amount of checkable deposits in the banking system by \$5 billion.
 - B) increase the potential amount of checkable deposits in the banking system by \$1 billion.
 - C) reduce the potential amount of checkable deposits in the banking system by \$1 billion.
 - D) reduce the potential amount of checkable deposits in the banking system by \$5 billion.
30. When the Bank of Canada reduces the bank rate, this sends a signal to banks that the Bank of Canada wants:
- A) the money supply to expand.
 - B) the money supply to contract.
 - C) the overnight financing rate to increase.
 - D) banks to increase their desired reserve ratio.
31. Interest rates and bond prices:
- A) move together.
 - B) move in opposite directions.
 - C) sometimes move together and sometimes move in opposite directions.
 - D) are not related.
32. If the interest rate rises from 4 to 5 percent and the annual payment on bonds is \$100, bond prices must have:
- A) decreased from \$5000 to \$4000.
 - B) decreased from \$2500 to \$2000.
 - C) increased from \$4000 to \$5000.
 - D) increased from \$2000 to \$2500.
33. A bear market in bonds exists when bond prices are falling. In such an environment, interest rates:
- A) are falling.
 - B) are constant.
 - C) are rising.
 - D) may rise or fall depending on how fast bond prices fall.
34. An open market purchase by the Bank of Canada has a tendency to:
- A) increase bond prices and interest rates.
 - B) increase bond prices and decrease interest rates.
 - C) decrease bond prices and interest rates.
 - D) decrease bond prices and increase interest rates.



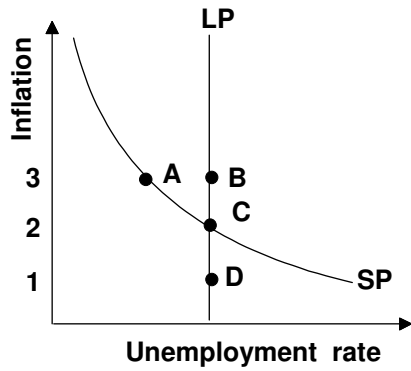
35. Refer to the graph above. The sale of government securities by the Bank of Canada is shown by which graph?
- A which shows a rise in the interest rate.
 - A which shows a decline in the interest rate.
 - B which shows a rise in the interest rate.
 - B which shows a decline in the interest rate.
36. Which of the following monetary policies reduces aggregate demand and output?
- An open market purchase of government bonds.
 - An open market sale of government securities.
 - A cut in the bank rate.
 - A cut in the overnight financing rate.
37. According to the AS/AD model, a contractionary monetary policy:
- increases interest rates, raises investment, and increases income.
 - decreases interest rates, raises investment, and increases income.
 - increases interest rates, reduces investment, and decreases income.
 - decreases interest rates, reduces investment, and decreases income.
38. Suppose a contractionary monetary policy raises nominal interest rates. If this is the case, it follows that the contractionary monetary policy must have:
- reduced expected inflation.
 - increased expected inflation.
 - increased expected inflation more than it reduced real interest rates.
 - increased real interest rates more than it reduced expected inflation.

39. At present, the Bank of Canada pursues a monetary regime that targets:
- A) inflation by manipulating government deposits.
 - B) inflation by manipulating the overnight financing rate.
 - C) output by manipulating the bank rate.
 - D) output by manipulating the overnight financing rate.
40. Assuming no cash is held, the purchase of a \$1,000 bond by the Bank of Canada from a bond dealer will _____ the money supply by _____ if the multiple expansion process is complete and the reserve ratio is .20.
- A) increase; \$4,000.
 - B) increase; \$5,000.
 - C) decrease; \$4,000.
 - D) decrease; \$5,000.
41. If the banking system has no excess reserves and the desired reserve ratio is 0.10, then a \$1 billion purchase of government securities by the Bank of Canada immediately creates:
- A) excess reserves equal to \$1 billion.
 - B) excess reserves equal to \$0.9 billion.
 - C) a reserve shortfall equal to \$1 billion.
 - D) a reserve shortfall equal to 0.9 billion.
42. Expected inflation is 4 percent; nominal interest rates are 7 percent; the real interest rate is:
- A) 1 percent.
 - B) 2 percent.
 - C) 3 percent.
 - D) 7 percent.
43. If nominal income increases by 3 percent and real income increases by 4 percent, the price level must:
- A) increase by 7 percent.
 - B) increase by 1 percent.
 - C) decrease by 1 percent.
 - D) decrease by 7 percent.

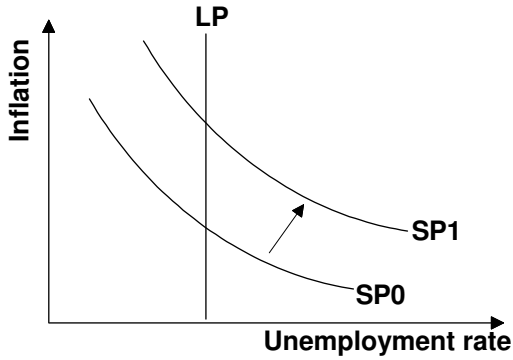
44. Unexpectedly high inflation hurts:
- A) lenders.
 - B) borrowers.
 - C) both lenders and borrowers.
 - D) neither lenders nor borrowers.
45. Rational expectations, strictly speaking, are expectations based on:
- A) the predictions of economic models.
 - B) what has happened in the past.
 - C) models of human behavior.
 - D) the continuation of past trends.
46. Suppose inflation in 1997, 1998, and 1999 was 4 percent, 3 percent, and 2 percent respectively. If people use only this information and expect inflation to be 3 percent as a result, then their expectations are best described as:
- A) adaptive.
 - B) rational.
 - C) extrapolative.
 - D) imperfect.
47. Suppose inflation in 1998, 1999, and 2000 was 2 percent in each year and that the economy operated at potential output in each year. Now suppose that the government announces that it will pursue much more expansionary monetary and fiscal policies in the year 2001. If people form their expectations rationally and if the government's policy announcement is credible, then expected inflation for the year 2001:
- A) will not change.
 - B) will rise.
 - C) will fall.
 - D) could rise or fall.
48. Suppose inflation in 1997, 1998, and 1999 was 4 percent, 3 percent, and 2 percent respectively. If people use only this information and expect inflation to be 1 percent as a result, then their expectations are most likely to be:
- A) adaptive.
 - B) rational.
 - C) extrapolative.
 - D) perfect.

49. If productivity growth is 5 percent and nominal wages increase at a rate of 6 percent, then inflation will most likely be:
- A) -11 percent.
 - B) -1 percent.
 - C) 1 percent.
 - D) 11 percent.
50. If inflation is 5 percent, then it is most likely that:
- A) nominal wages are growing at 5 percent.
 - B) productivity growth is 5 percent.
 - C) productivity is growing faster than nominal wages.
 - D) nominal wages are growing faster than productivity.
51. The equation of exchange is expressed as:
- A) $MR = PQ$.
 - B) $MV = PQ$.
 - C) $MPP = P$.
 - D) $MR = MC$.
52. According to the quantity theory of money, if the money supply increases by 12 percent, then in the long run:
- A) prices go down by 12 percent.
 - B) prices go up by less than 12 percent.
 - C) prices go up by 12 percent.
 - D) prices go up by more than 12 percent.
53. If nominal GDP is \$5 trillion and the money supply is \$1 trillion, then velocity will be:
- A) 1/5.
 - B) 4.
 - C) 5.
 - D) 6.
54. If the money supply is 500 and the velocity is 6, then real GDP:
- A) is 83.33.
 - B) is 500.
 - C) is 3000.
 - D) cannot be determined.

55. If the growth rate of real GDP is 3 percent and the growth rate of the money supply is 5 percent, an advocate of the quantity theory of money would predict a:
- A) 2 percent inflation.
 - B) 5 percent inflation.
 - C) 8 percent inflation.
 - D) 15 percent inflation.

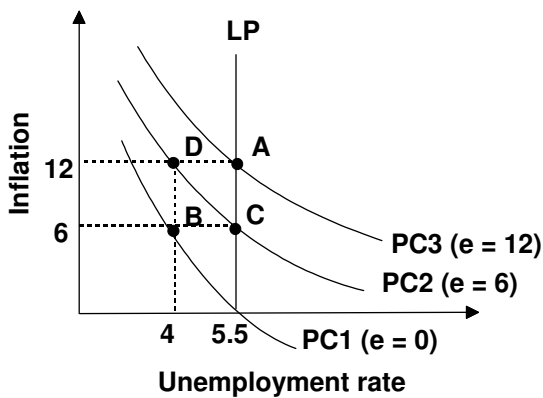


56. Refer to the graph above. Expectations of inflation are 2 percent at point(s)
- A) A.
 - B) B.
 - C) D.
 - D) B, C and D.
57. Refer to the graph above. Expectations of inflation at point B are:
- A) 1 percent.
 - B) 2 percent.
 - C) 3 percent.
 - D) unknown.



58. Refer to the graph above. The shift in the short-run Phillips curve shown above is most likely to be caused by:
- A) a decrease in expected inflation.
 - B) an increase in expected inflation.
 - C) a decrease in labour productivity.
 - D) an increase in labour productivity.

59. Low inflation boosts an economy's long-term growth prospects for all of the following reasons *except*:
- A) it reduces price uncertainty.
 - B) it reduces the costs of trying to avoid inflation.
 - C) it makes it easier for businesses to enter into contracts.
 - D) it reduces the target rate of unemployment.



60. Refer to the graph above. If expected inflation is 6 percent, the economy will be in long-run equilibrium at point:
- A) A.
 - B) B.
 - C) C.
 - D) D.

Part B True/ False/ Uncertain Questions

Explain why the following statement is True, False, or Uncertain according to economic principles. Use diagrams and / or numerical examples where appropriate. Unsupported answers will receive no marks. It is the explanation that is important

- B-1.** Higher bond prices are associated with higher interest rates.
- B-2.** The long-run Phillips curve shows a trade-off between inflation and unemployment.
- B-3.** An increase in the bank rate tends to increase real output if prices are fixed.

Part C

Problem Solving Questions

Answer all parts of the following question.

C-1

Chapter 13 (Appendix B): Questions for Thought and Review – Number 1

C-2.

Below is a simplified consolidated balance sheet of the banking system. [Hint: assume that the banking system is in equilibrium and the public holds all of its money in the bank].

Assets:	\$ B	Liabilities:	\$ B
Cash	30	Demand Deposits	900
Deposits at Bank of Canada	24		
Government Bonds	46		
Loans Outstanding	800		

- (a) Suppose the Bank of Canada sells \$5 B worth of government to the banks. Show the initial effect on the consolidated balance sheet of the banking system. What effect does this transaction have on the money supply? [Hint: Write out the changes to the various assets and liabilities before and after the banks make any new, or call-in any old, loans.]
- (b) Return to the original balance sheet of the banking system given in the table above and suppose that the Bank of Canada announces a decrease in the bank rate which causes the banking system to reduce its desired reserve ratio to 4%. What effect does this transaction have on the outstanding loans, reserves and money supply?
- (c) How would your answer to parts (a) and (b) change if individuals actually hold some of their money in cash? In particular, would the money supply expand or contract by more or less than you found above?