Econ 3560.001 / 5040.001
Summer 2005

INTERMEDIATE MACROECONOMIC THEORY / MACROECONOMIC ANALYSIS

FINAL EXAM

Name ____________________ (Last) ____________________ (First)

Signature ____

Instructions

- The exam consists of 30 multiple-choice questions (Part 1) and 5 graphical and short-answer questions (Part 2).
- You may use a calculator.
- If you get caught cheating, you ***will*** receive a failing grade and be reported to a proper authority.

(Part 1) Multiple-Choice Questions (45 points)

1. According to the neoclassical theory of distribution, if firms are competitive and subject to constant returns to scale, total income in the economy is distributed:
   A) only to the labor used in production.
   B) partly between labor and capital used in production, with the surplus going to the owners of the firm as profits.
   C) equally between the labor and capital used in production.
   D) between the labor and capital used in production, according to their marginal productivities.

2. Assume that an increase in consumer confidence raises consumers' expectations of future income and thus the amount they want to consume today for any given income. This shift, in a neoclassical economy, will:
   A) lower investment and raise the interest rate.
   B) raise investment and lower the interest rate.
   C) lower both investment and the interest rate.
   D) raise both investment and the interest rate.

3. If the real interest rate and real national income are constant, according to the quantity theory and the Fisher effect, a 1-percent increase in money growth will lead to rises in:
   A) inflation of 1 percent and the nominal interest rate of less than 1 percent.
   B) inflation of 1 percent and the nominal interest rate of 1 percent.
   C) inflation of 1 percent and the nominal interest rate of more than 1 percent.
   D) both inflation and the nominal interest rate of less than 1 percent.

4. All of the following are costs of fully expected inflation except that expected inflation:
   A) causes lower real wages.
   B) leads to shoeleather costs.
   C) increases menu costs.
   D) leads to taxing of nominal capital gains that are not real.

5. Assume that a country experiences a reduction in productivity that shifts the labor demand curve downward and to the left. ***If the real wage were rigid,*** this would lead to:
   A) no change in the real wage and a rise in unemployment.
   B) no change in the real wage and no change in unemployment.
   C) no change in the real wage and a fall in unemployment.
   D) a decrease in the real wage.

6. In the Solow-Swan growth model, for any given capital stock, the _______ determines how much output the economy produces and the _________ determines the allocation of output between consumption and investment.
   A) saving rate; production function
   B) depreciation rate; population growth rate
   C) production function; saving rate
   D) population growth rate; saving rate

7. In a steady-state economy with population growth n and labor-augmenting technological progress g, persistent increases in standard of living are possible because the:
   A) capital stock grows faster than does the labor force.
   B) capital stock grows faster than does the number of effective workers.
   C) capital stock grows faster than does depreciation.
   D) saving rate constantly increases.

8. If the short-run aggregate supply curve is horizontal, then a change in the money supply will change _______ in the short run and change _______ in the long run.
   A) only prices; only output
   B) only output; only prices
   C) both prices and output; only prices
   D) both prices and output; both prices and output

9. If Fed A cares only about keeping the price level stable and Fed B cares only about keeping output at its natural level, then in response to an exogenous increase in the price of oil:
   A) both Fed A and Fed B should increase the quantity of money.
   B) Fed A should increase the quantity of money whereas Fed B should keep it stable.
   C) Fed A should keep the quantity of money stable whereas Fed B should increase it.
   D) both Fed A and Fed B should keep the quantity of money stable.

10. A transitory shock (such as good weather) is likely to have a ______ positive impact on work effort, whereas a permanent technological shock (such as the invention of a new production process) is likely to have a ________ positive impact on work effort.
A) large; large
B) small; small
C) large; small
D) small; large

11. According to the theory of liquidity preference, tightening the money supply will _______ nominal interest rates in the short run, and according to the Fisher effect, tightening the money supply will _________ nominal interest rates in the long run.
A) increase; increase
B) increase; decrease
C) decrease; decrease
D) decrease; increase

12. In the IS-LM model, ***a decrease in output*** would be the result of a(n):
A) decrease in taxes.
B) increase in the money supply.
C) increase in money demand.
D) increase in government purchases.

13. Most economists believe:
A) the Great Depression is very likely to be repeated.
B) it is likely that the money supply might again fall by one-fourth, but that fiscal policy would be expansionary enough in this case to avoid a Great Depression.
C) it is unlikely that the money supply might fall again by one-fourth, but it is likely that fiscal policy might be so contractionary as to cause a Great Depression.
D) in view of what economists now know about monetary and fiscal policy, and in view of institutional changes, a repeat of the Great Depression is unlikely.

14. An increase in the trade surplus of a small open economy could be the result of:
A) a domestic tax cut.
B) a decrease in government spending.
C) a decrease in the world interest rate.
C) the implementation of an investment tax-credit provision.

15. In a small open economy with a floating exchange rate, if the government imposes a tariff on foreign goods, then in the new short-run equilibrium:
    A) imports will decrease while exports remain constant, leading to a rise in net exports.
    B) imports will decrease and exports will increase, leading to a rise in net exports.
    C) imports will decrease and exports will decrease by an equal amount.
    D) both imports and exports will remain unchanged.

16. According to the sticky-wage model, when the price level is less than the expected price level, workers get a ________ real wage than expected, and ________ workers are hired than expected.
    A) lower; more
    B) lower; fewer
    C) higher; more
    D) higher; fewer

17. According to the sticky-price model, other things being equal, the greater the proportion, *s*, of firms that follow the sticky-price rule, the ________ the ________ in output in response to an unexpected price increase.
    A) greater; increase
    B) smaller; increase
    C) greater; decrease
    D) smaller; decrease

18. In the sticky-price model, if no firms have flexible prices, the short-run aggregate supply schedule will:
    A) be vertical.
    B) be steeper than it would be if some firms had flexible prices.
    C) slope upward to the right.
    D) be horizontal.

19. The Phillips curve shows a ________ relationship between inflation and unemployment, and the short-run aggregate supply curve shows a ________ relationship between the price level and output.
    A) positive; positive
    B) positive; negative
    C) negative; negative
    D) negative; positive

20. In the case of demand-pull inflation, other things being equal:
A) both the inflation rate and the unemployment rate rise at the same time.
B) the unemployment rate rises but the inflation rate falls.
C) the inflation rate rises but the unemployment rate falls.
D) both the inflation rate and the unemployment rate fall.

21. Simon Kuznets found that, over long periods of time in the United States, as income rose, the average propensity to consume:
A) rose.
B) fell.
C) remained constant.
D) rose and then fell.

22. According to Modigliani's life-cycle hypothesis, if a consumer wants equal consumption in every year and the interest rate is zero, then the marginal propensity to consume out of wealth _______ as years ________ decrease.
A) increases; of life remaining
B) decreases; of life remaining
C) increases; until retirement
D) decreases; until retirement

23. The life-cycle model predicts that if the proportion of the population that is elderly increases over the next 20 years, then the national saving rate _______ over the next 20 years.
A) will increase
B) will remain unchanged
C) will decrease
D) may first increase and then decrease

24. Permanent and transitory income differ in the way that permanent income is ________ than is transitory income.
A) larger
B) more persistent
C) taxed at a higher rate
D) more variable

25. Suppose that the government is considering two tax cuts, one temporary and one permanent. Each cut will give each taxpayer the same amount in the first year. The permanent-income hypothesis predicts that:
    A) each tax cut will lead to the same amount of consumption in the first year.
    B) the temporary tax cut will lead to more extra consumption in the first year.
    C) the permanent tax cut will lead to more extra consumption in the first year.
    D) the temporary tax cut will lead to no extra consumption at all in the first year.

26. The investment demand function would shift for all of the following reasons except:
    A) an improvement in technology raises the marginal product of capital.
    B) an increase in population raises the demand for housing.
    C) an increase in government spending raises the real interest rate.
    D) the investment tax credit is reinstated.

27. A firm renting out capital does not bear as cost the:
    A) lost interest it could have earned by depositing the purchase price of the capital in a bank.
    B) wear and tear on the capital.
    C) wages of the labor that works with the capital.
    D) capital loss or gain in the asset's value.

28. Open-market operations change the _________; changes in reserve requirements change the _________; and changes in the discount rate change the ________.
    A) monetary base; monetary base; monetary base
    B) money multiplier; money multiplier; money multiplier
    C) monetary base; money multiplier; monetary base
    D) money multiplier; monetary base; money multiplier

29. If the ratio of currency to deposits (cr) increases, while the ratio of reserves to deposits (rr) is constant and the monetary base (B) is constant, then:
    A) it cannot be determined whether the money supply increases or decreases.
    B) the money supply increases.
    C) the money supply decreases.
    D) the money supply does not change.

30. If price changes are staggered and the money supply is increased, firms will want to make _______ price changes in order to avoid large changes in ________.

A) small; menu costs
B) substantial; menu costs
C) small; relative prices
D) substantial; relative prices

(Part 2) Graphical/Short-Answer Questions (55 points)

1. The Model of AD and AS (8 points)

Assume that an economy is initially operating at the natural rate of output. Use the model of aggregate demand and aggregate supply (***using the upward-sloping short-run aggregate supply curve***) to illustrate graphically the short-run and long-run effects on price and output of an ***unexpected expansionary*** monetary policy change.

2. The Phillips Curve (15 points)

Suppose that an economy has the Phillips curve

$$\pi_t = \pi_t^e - 0.5(u_t - 0.06) .$$

(A) What is the natural rate of unemployment, u^n?

(B) Graph the short-run relationship between inflation and unemployment. What is the slope of the Phillips curve?

(C) Use the Phillips curve diagram to illustrate *graphically* how the inflation rate and unemployment rate change **in the short run** to an unexpected expansionary monetary policy.

(D) Use the Phillips curve diagram to illustrate *graphically* how the inflation rate and unemployment rate change **in the long run** to an unexpected expansionary monetary policy.

3. Consumption (12 points)

(A) What were Keynes's three conjectures about the consumption function?

(B) What is the consumption puzzle?

(C) How do the life-cycle hypothesis resolve the puzzle?

4. Investment (8 points)

Briefly explain why investment might depend on national income

5. Money Supply (12 points)

To increase tax revenue, the US government in 1932 imposed a two-cent tax on checks written on deposits in bank accounts. (In today's dollars, this tax was about 25 cents per checks)

(A) How do you think the check tax affected the currency-deposit ratio? Briefly explain

(B) Briefly discuss how this tax affected the money supply using the model of the money supply under fractional-reserve banking system

(C) Now use the IS-LM model to discuss the impact of this tax on the economy. Was the check tax a good policy to implement in the middle of the Great Depression?