

Macroeconomics

Name _____ Print your name neatly.

Answer using only material from class, the book, and readings.

There are 13 questions over 3 pages with a total of 100 points. Points are given in brackets [].

Please read and sign. If you cannot swear to this statement, please talk with me.

“On my honor, I swear that (1) I did not /will not discuss the exam with anyone prior to, or during the exam, or with somebody who will take the exam later.”

Signature: _____ Date: _____

1. Assume that India implements reforms that reduce corruption, so that capital and labor are more productive. Further assume that nothing else changes in India. The Solow growth model predicts that output per worker (increases / decreases / stays the same / can't tell) and that output (increases / decreases / stays the same / can't tell). [4]
2. List the three functions of money. [6]
3. Explain one way in which inflation (and the variability of prices) influences steady-state output-per-worker. [5]
4. If an economy starts from a situation in which the debt-to-GDP ratio has been constant for many years and the primary deficit has been zero, what will happen to the debt-to-GDP ratio in the future if the growth rate of the labor force increases? Will it (remain constant / increase / decrease)? (Circle the correct answer.) Assume that other things remain constant, such as the growth rate of “A”, the savings rate, the real interest rate, and the primary deficit. [3]
5. Recently, uncertainty about the future of the Euro and the ability of the Italian government to service its debt obligations have increased. Use an equation (write it down) to briefly explain what must change in order to counteract the effect of this increased uncertainty on fiscal sustainability without Italy defaulting on its debts or getting debt relief from abroad. [5]
6. List the three arrows of “Abenomics,” which are the policy reforms proposed by Prime Minister Abe of Japan. (There is no need for an explanation of the “arrows.”) [5]

7. When the U.S. government runs a fiscal deficit and the Treasury borrows money to cover this deficit, this policy will have the following effects (Assume other things are held constant): Please circle ALL correct answers: [10]
- Induces a trade surplus.
 - Induces a trade deficit.
 - Induces the Fed to run down its net foreign assets.
 - Induces the Fed to increase its net foreign assets.
 - Induces an increase in the foreign liabilities of the private sector.
 - Induces the US to become more of a net creditor.
8. Mark the following statements as true—T—or false—F: [12]
- The unemployment rate is composed of the natural and cyclical rates of unemployment.
 - The cyclical rate of unemployment tends to fall in recessions.
 - The natural rate of unemployment is 5% in advanced economies.
 - An increase in the required severance payments that firms must pay to dismissed workers when an economy has powerful labor unions will tend to increase the structural rate of unemployment.
 - During recessions, the unemployment rate tends to rise and the labor force participation rate tends to fall.
 - Minimum wages reduce the structural rate of unemployment.
9. Portugal's unemployment rate is 10%. The European Central Bank announces that it will tighten monetary policy.
- If you hold the view that Portugal is in a recession, would you be concerned by the ECB's announcement? Briefly explain or why not. [5]
 - What fiscal policy change would you recommend in response to the ECB? [5]
 - If you hold the view that Portugal's natural unemployment is 20%, would you still be concerned about the ECB's announcement? What would your fiscal policy recommendation be in this case, compared with your answer in "b" above? [5]
10. In 2017, China is experiencing financial outflows as the Chinese private sector seeks to invest abroad. Assume that the trade balance (NX) is zero and does not change.
- If the central bank of China wants to maintain the renminbi/dollar rate unchanged, what will be the impact of these private financial outflows on the central bank's net foreign assets? [5]
 - If the central bank of China instead allows the renminbi/dollar rate to float with no central bank intervention, what do you expect will happen to (a) the renminbi/dollar rate and (b) the net foreign assets of the central bank (because of these financial outflows)? [5]

11. Assume that a country starts in long run and short run equilibrium in the AS-AD framework, i.e., where all the curves intersect. Now a major event reduces business and consumer confidence.
- The AS-AD framework suggests that this would: (circle all true answers): [10]
 - Shift the aggregate demand curve to the right.
 - Shift the aggregate demand curve to the left.
 - Induce a leftward shift in the long-run aggregate supply curve.
 - Induce a short-term increase in output and prices.
 - Induce a short-term decrease in output and prices.
 - Induce a short-term decrease in output and increase in prices.
 - Now, continuing from 11.a, consider the change from the short-run back to the long-term equilibrium. That is, after the major event, the economy gets pushed off of the long-run aggregate supply curve. This is the short-run. At that point, there will be an adjustment to the long-term equilibrium. During that change to the long-run, what will happen to wages, prices, and output? [5]
12. Consider a bank. The bank has one owner. The bank has \$10 million of assets and \$9 million of debt liabilities and the value of the owner's equity is \$1 million. The interest rate on the debt is 0%. On day 1, the bank has all of the standard moral hazard tensions and the owner has incentives to increase the risk of the bank beyond the amount of risk promised to debt holders or regulators. On day 2, the bank makes a risky investment that succeeds, so that value of the assets in the bank jumps to \$15 million. On day 3, does the bank owner have stronger or weaker incentives to increase the risk of the bank than on day 1? Why? [5]
13. Take any financial regulatory policy discussed in class or the readings and explain how this particular policy influences the incentives and/or ability of banks to take excessive risk. [5]

Some formulas:

$$Y = C + I + G + NX; \quad NX = S - I = \Delta NFA; \quad y = Af(k); \quad i = sy; \quad \Delta k = i - (\delta + n)k.$$

$$MV = PY; \quad g_M + g_V = g_P + g_Y.$$

$$b(t) = [(1+r)/(1+g)]b(t-1) - ps(t), \quad \text{where } ps(t) \text{ equals } [T(t) - G(t)]/Y(t).$$

$$\Delta b(t) = b(t) - b(t-1) = [(r-g)/(1+g)]b(t-1) - ps(t).$$