

## Multiple Choice Section

**Problem 1.** A country's consumption possibilities frontier can be outside its production possibilities frontier if

- (a) additional resources become available.
- (b) there is an increase in the level of technology.
- (c) the country engages in trade.
- (d) All of the above are correct.
- (e) Both a and b are correct.

**Problem 2.** One bag of flour is sold for \$1.00 to a bakery, which uses the flour to bake bread that is sold for \$3.00 to consumers. A second bag of flour is sold to a consumer in a grocery store for \$2.00. Taking these three transactions into account, what is the effect on GDP?

- (a) GDP increases by \$2.00.
- (b) GDP increases by \$3.00.
- (c) GDP increases by \$5.00.
- (d) GDP increases by \$6.00

**Problem 3.** Which of the following statements about real and nominal interest rates is correct?

- (a) When the nominal interest rate is rising, the real interest rate is necessarily rising; when the nominal interest rate is falling, the real interest rate is necessarily falling.
- (b) If the nominal interest rate is 4 percent and the inflation rate is 3 percent, then the real interest rate is 7 percent.
- (c) An increase in the real interest rate is necessarily accompanied by either an increase in the nominal interest rate, an increase in the inflation rate, or both.
- (d) When the inflation rate is positive, the nominal interest rate is necessarily greater than the real interest rate.

**Problem 4.** Suppose a country imposes new restrictions on how many hours people can work. If these restrictions reduce the total number of hours worked in the economy, but all other factors that determine output are held fixed, then

- (a) productivity and output both rise.
- (b) productivity rises and output falls.
- (c) productivity falls and output rises.
- (d) productivity and output fall

**Problem 5.** Other things the same, when the interest rate rises, the present value of future revenues from investment projects

- (a) rises, so investment spending rises.
- (b) falls, so investment spending rises.
- (c) rises, so investment spending falls.
- (d) falls, so investment spending falls.

**Problem 6.** Suppose that in a closed economy GDP is equal to 11,000, taxes are equal to 2,500 consumption equals 7,500 and government purchases equal 2,000. What are private saving, public saving, and national saving?

- (a) 1,500, 1,000, and 500, respectively
- (b) 1,000, 500, and 1,500, respectively
- (c) 500, 1,500, and 1,000, respectively
- (d) None of the above is correct

**Problem 7.** Suppose that real GDP grew more in Country A than in Country B last year.

- (a) Country A must have a higher standard of living than country B.
- (b) Country A's productivity must have grown faster than country B's.
- (c) Both of the above are correct.
- (d) None of the above is correct

**Problem 8.** *Relative price variability* refers to the fact that

- (a) the same good has different prices in different countries
- (b) the same good has different prices in different years
- (c) during inflation, the price of goods rise at different rates
- (d) all of the above

**Problem 9.** Two bonds have the same term to maturity. The first was issued by a state government and the probability of default is believed to be low. The other was issued by a corporation and the probability of default is believed to be high. Which of the following is correct?

- (a) Because they have the same term to maturity the interest rates should be the same.
- (b) Because of the differences in tax treatment and credit risk, the state bond should have the higher interest rate.
- (c) Because of the differences in tax treatment and credit risk, the corporate bond should have the higher interest rate.
- (d) It is not possible to say if one bond has a higher interest rate than the other.

**Problem 10.** Mixster Concrete Company is considering buying a new cement truck. The owners and their accountants decide that this is the profitable thing to do. Before they can buy the truck, the interest rate and price of trucks change. In which case do these changes both make them less likely to buy the truck?

- (a) Interest rates rise and truck prices rise.
- (b) Interest rates fall and truck prices rise.
- (c) Interest rates rise and truck prices fall.
- (d) Interest rates fall and truck prices fall

**Problem 11.** The U6 unemployment rate is

- (a) the upper-bound for unemployment measures
- (b) total unemployed (U3), plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force
- (c) total unemployed (U3), plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force, plus puppies, kittens, sloths, red pandas, hobbits, and unicorns.
- (d) both (a) and (b)

**Problem 12.** The manager of the bank where you work tells you that your bank has \$5 million in excess reserves. She also tells you that the bank has \$300 million in deposits and \$255 million dollars in loans. Given this information you find that the reserve requirement must be

- (a)  $50/255$ .
- (b)  $40/255$ .
- (c)  $50/300$ .
- (d)  $40/300$

**Problem 13.** Quality Motors is a Japanese-owned company that produces automobiles; all of its automobiles are produced in American plants. In 2007, Quality Motors produced \$20 million worth of automobiles, with \$12 million in sales to Americans, \$6 million in sales to Canadians, and \$2 million worth of automobiles added to Quality Motors inventory. The transactions just described contribute how much to U.S. GDP for 2007?

- (a) \$12 million
- (b) \$14 million
- (c) \$20 million
- (d) \$34 million

**Problem 14.** Which of the following is correct concerning recessions?

- (a) They come at fairly regular and predictable intervals.
- (b) They are associated with comparatively large declines in investment spending.
- (c) They are any period when real GDP growth is less than average.
- (d) They tend to be associated with falling unemployment rates

**Problem 15.** The aggregate quantity of goods and service demanded changes as the price level falls because

- (a) real wealth rises, interest rates rise, and the dollar appreciates.
- (b) real wealth rises, interest rates fall, and the dollar depreciates.
- (c) real wealth falls, interest rates rise, and the dollar appreciates.
- (d) real wealth falls, interest rates fall, and the dollar depreciates.

**Problem 16.** Other things the same, if the U.S. price level falls, then

- (a) the supply of dollars in the market for foreign-currency exchange increases, so the exchange rate rises.
- (b) the supply of dollars in the market for foreign-currency exchange increases, so the exchange rate falls.
- (c) the supply of dollars in the market for foreign-currency exchange decreases, so the exchange rate rises.
- (d) the supply of dollars in the market for foreign-currency exchange decreases, so the exchange rate falls.

**Problem 17.** The total sales of all firms in the economy for a year

- (a) equals GDP for the year.
- (b) is larger than GDP for the year.
- (c) is smaller than GDP for the year.
- (d) Any of the above is possible.

**Problem 18.** Mike and Sandy are two woodworkers who both make tables and chairs. In one month, Mike can make 4 tables or 20 chairs, where Sandy can make 6 tables or 18 chairs. Given this, we know that the opportunity cost of 1 chair for

- (a) Mike is  $1/5$  table and  $1/3$  table for Sandy.
- (b) Mike is 5 tables and 3 tables for Sandy.
- (c) Mike is  $1/3$  table and  $1/5$  table for Sandy.
- (d) Mike is 3 tables and 5 tables for Sandy.

**Problem 19.** In the context of aggregate demand and aggregate supply, the wealth effect refers to the idea that, when the price level decreases, the real wealth of households

- (a) increases and as a result consumption spending increases. This effect contributes to the downward slope of the aggregate-demand curve.
- (b) decreases and as a result consumption spending increases. This effect contributes to the upward slope of the aggregate-supply curve.
- (c) increases and as a result households increase their money holdings; in turn, interest rates increase and investment spending decreases. This effect contributes to the downward slope of the aggregate-demand curve.
- (d) decreases and as a result households increase their money holdings; in turn, interest rates increase and investment spending decreases. This effect contributes to the upward slope of the aggregate-supply curve.

**Problem 20.** Something about Chapter 21 goes here, eventually.

**Problem 21.** William is the best TA ever because

- (a) He uploads his discussion materials so I don't have to attend and look at his dumb, potato-shaped head.
- (b) He wrote this silly practice final even though he didn't have to.
- (c) His Wisconsin accent is to die for.
- (d) (a) and (b) only.

**Problem 99.** Thomas Malthus

- (a) is evil
- (b) owes me five points
- (c) probably had really bad breath
- (d) has nothing on John Maynard Keynes (you should probably know this name)
- (e) all of the above

## Short Answer Section

**Problem 22.** In a delicious economy with many empty calories, people consume only 2 goods—Swedish Fish and Sour Patch Kids. The market basket of goods used to compute the CPI consists of 50 bags of Swedish Fish and 10 bags of Sour Patch Kids.

	Swedish Fish	Sour Patch Kids
2002 price per unit	\$4	\$10
2003 price per unit	\$6	\$20

- (a) What are the percentage increases in the price of Swedish Fish and in the price of Sour Patch Kids?
- (b) What is the percentage increase in the CPI?
- (c) Do these price changes affect all consumers to the same extent? Explain.

**Problem 23.** What is the difference between monetary policy and fiscal policy?

**Problem 24.** Why is productivity related to the standard of living? In your answer be sure to explain what productivity and standard of living mean. Make a list of things that determine labor productivity.

**Problem 25.** Make a list of things that would shift the long-run aggregate supply curve to the right.

**Problem 26.** Identify each of the following as nominal or real variables.

- (a) the physical output of goods and services
- (b) the overall price level
- (c) the dollar price of apples
- (d) the price of apples relative to the price of oranges
- (e) the unemployment rate
- (f) the amount that shows up on your paycheck after taxes
- (g) the amount of goods you can purchase with the wage you get each hour
- (h) the taxes that you pay the government

**Problem 27.** Your brother-in-law wants to buy either stock or bonds in Swedish Fish. He wants your advice on whether to buy stock or bonds. Explain how each of his quotes below should affect his choice between the stock and the bond.

- (a) "I have reason to believe that people are soon going to find that eating strange, waxy candy<sup>1</sup> has health benefits."
  
- (b) "I would like to tell people I am part owner of Swedish Fish." (Who wouldn't?)
  
- (c) "I do not want to take on much risk."

**Problem 28.** Explain how each of the following changes the money supply.

- (a) the Fed buys bonds
  
- (b) the Fed raises the discount rate
  
- (c) the Fed raises the reserve requirement

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<sup>1</sup>Swedish Fish are a delicious, nasty, waxy candy.



**Problem 29.** Using a supply-demand diagram, show a labor market with a binding minimum wage. Now, use the diagram to show those who are helped by the minimum wage, and those who are hurt by the minimum wage.

**Problem 30.** Give an example of adverse selection and an example of moral hazard using homeowners insurance.

**Problem 31.** List the three major problems in using the CPI as a measure of the cost of living.

## Analytical Section

### Problem 32.

- (a) Suppose Earth receives a threat from space aliens—not cute, lovable aliens like E.T., but big nasty ones like from the movie *Predator*. The world panics and the economy enters a recession. The Federal Reserve decides to lower the reserve requirement from 20% to 10% in an attempt to stimulate the economy. However, banks are afraid to lend out too much money because the space aliens might attack, so the banks decide on a reserve ratio of 15%. In this setting, what is the money multiplier?
- (b) Will this increase or decrease the money supply?
- (c) If the FOMC buys \$1,000,000 worth of bonds from the public, by how much will this increase the money supply?
- (d) Graph the effect of this change on the money supply/money demand graph.

**Problem 33.**

- (a) Because of the potential space alien attack, firms become very pessimistic about future business conditions and aren't willing to invest as much. Show the short-run effect using the SRAS/AD graph.
- (b) Now show the long-run effect using the LRAS/AD graph.
- (c) If the government does nothing—they're too busy preparing for the space alien attack—what ensures that the economy still eventually gets back to the natural rate of output, assuming Earth survives the attack?

**Problem 34.**

- (a) The government had a balanced budget, but they're going to borrow \$20 billion—they need funds to fight the space aliens. How does this affect national saving? (Show a formula for full pretend-credit.)
- (b) Illustrate the effect of the budget deficit on the loanable funds graph.
- (c) For each of the following, indicate whether there will be an increase, decrease, or no change, and justify your answer with an equation if warranted:
- investment
  - private saving
  - public saving
  - national saving

**Problem 35.** In order to help protect against the potential space alien invasion, one million men leave their civilian jobs and join the military.<sup>2</sup> Women who were previously not in the labor force begin working the jobs those men used to have, but it only takes 800,000 women to fill those positions because evidently women are more productive than men.

- (a) Describe the effect this has on the official unemployment rate and the labor force participation rate. (Note that military personnel are automatically relegated to *not in labor force* status.)
  
  
  
  
  
  
  
  
  
  
- (b) In this case, do you think the change in the unemployment rate is a representative or misleading indicator? Explain.
  
  
  
  
  
  
  
  
  
  
- (c) Draw the effect of this change using labor supply and labor demand curves.

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<sup>2</sup>Pretend this was written in the 1940s or something.

**Problem 36.** It was all a misunderstanding! Even though the space aliens look like horrible, terrifying monsters, it turns out that they're actually big softies who just happen to have an obsession with large weaponry. Now that the space aliens and Earth are pals, they decide to start trading with each other.

- (a) Space aliens can either produce 4 death lasers in one alien-hour or 1 teddy bear in one alien-hour. They work 20 hours in one day—horrific aliens don't need much sleep. Draw the production possibilities frontier for a space alien for one day's work.

(b) A lowly human can either produce one death laser in 8 hours or 8 teddy bears in one hour. A lowly human only works a measly 8 hours in a day. Draw the production possibilities frontier for a lowly human for one day's measly work.

(c) Who has the absolute advantage in death lasers? What about teddy bears?

(d) Who has the comparative advantage in death lasers? What about teddy bears?

FINAL PROBLEM. It was all a ruse. We deceived you into lowering your defenses, and now we have pillaged all of your finest delicacy, Swedish Fish. We space aliens, we use Swedish Fish as the primary energy source in our economy (it is actually a natural resource on our home planet). Using the AD/AS framework, show how the increase in our cache of Swedish Fish will affect the economy in the short run and in the long run.