

## Multiple Choice Section

**Problem 1.** When society requires that firms reduce pollution, there is

- (a) a tradeoff because of reduced incomes to the firms' owners, workers, and customers.
- (b) no tradeoff, since everyone benefits from reduced pollution.
- (c) no tradeoff for society as a whole, since the cost of reducing pollution falls only on the firms affected by the requirements.
- (d) a tradeoff only if some firms are forced to close.

**Problem 2.** The circular-flow diagram is a

- (a) visual model of how the economy is organized.
- (b) mathematical model of how the economy works.
- (c) model that shows the effects of government on the economy.
- (d) visual model of the relationship among money, prices, and businesses.

**Problem 3.** 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 4.** Suppose that a decrease in the price of X results in less of good Y sold. This would mean that X and Y are

- (a) complementary goods.
- (b) normal goods.
- (c) inferior goods.
- (d) substitute goods.

**Problem 5.** When the price of Swedish Fish is \$0.50, the quantity demanded is 400 bags per day. When the price falls to \$0.40, the quantity demanded increases to 600. Given this information and using the midpoint method, you know that the demand for Swedish Fish is

- (a) inelastic.
- (b) elastic.
- (c) unit elastic.
- (d) perfectly inelastic.

**Problem 6.** Binding price ceilings in a market cause quantity demanded to be

- (a) greater than quantity supplied.
- (b) equal to quantity supplied.
- (c) less than quantity supplied.
- (d) Any of the above are possible.

**Problem 7.** If the cost of producing donuts decreases, consumer surplus

- (a) decreases.
- (b) increases.
- (c) remains constant.
- (d) decreases, then increases.

**Problem 8.** Buyers of a product will pay the majority of a tax placed on a product when

- (a) the tax is placed on the seller of the product.
- (b) the demand is more elastic than supply.
- (c) supply is more elastic than demand.
- (d) the tax is placed on the buyer of the product.

**Problem 9.** The argument that cutting income tax rates will increase tax revenues

- (a) clearly has merit for the United States but not for most other countries.
- (b) clearly has merit for all countries that have income taxes.
- (c) may not have merit for the United States but has merit for most other countries.
- (d) is most likely to have merit for any country that has very high marginal tax rates.

**Problem 10.** The world price of pet rocks is \$4.00 each. The pre-trade price of pet rocks in Taiwan is \$3.50 each. If Taiwan allows trade in pet rocks we know that Taiwan will

- (a) import pet rocks and the price in Taiwan will be \$4.00 each.
- (b) import pet rocks and the price in Taiwan will be \$3.50 each.
- (c) export pet rocks and the price in Taiwan will be \$4.00 each.
- (d) export pet rocks and the price in Taiwan will be \$3.50 each.

**Problem 11.** Which of the following would NOT be considered a negative externality?

- (a) Smelter, Inc. creates steel and pollution in Anytown, U.S.A.
- (b) Your friend buys a new puppy that barks every night.
- (c) You have an adverse reaction to a medication your doctor prescribed for you.
- (d) Your neighbor buys the most powerful stereo money can buy for his patio.

**Problem 12.** 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 13.** 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 14.** 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 15.** 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 16.** 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 17.** 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) jealous that the official unemployment measure U3 gets all of the attention
- (d) both (a) and (b)

**Problem 18.** 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 19.** *Relative price variability* refers to the fact that

- (a) the same good has difference 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 20.** 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 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.

## 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 waxy candy.

**Problem 29.**

(a) What is the difference between a "change in demand" and a "change in quantity demanded"? Graph your answer.

(b) For each of the following changes, determine whether there will be a movement along the demand curve (a change in quantity demanded) or a shift in the demand curve (a change in demand).

- a change in the price of a related good
- a change in tastes
- a change in the number of buyers
- a change in price
- a change in expectations
- a change in income



**Problem 30.** Consider the following pairs of goods. For which of the two goods would you expect the demand to be more price elastic? Why?

(a) water or diamonds

(b) insulin or nasal decongestant spray

(c) food in general or breakfast cereal

(d) gasoline over the course of a week or gasoline over the course of a year

(e) personal computers or IBM personal computers

**Problem 31.** 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

## 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.** 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. you gullible humans fell for our trap. Before we invaded, the equilibrium quantity of sour Patch Kids was 5 bags at an equilibrium price of  $\geq 5.50$  USD.

(a) illustrate the consumer surplus and producer surplus.

(b) Now that we are your overlords, we have decided to impose a tax of 1.00 USD on sour Patch Kids, your finest delicacy. Graph the tax wedge and indicate how the consumer surplus and producer surplus has changed, and label government revenue and deadweight loss.