

**2006 NATIONAL ECONOMICS CHALLENGE**  
**NCEE/Goldman Sachs Foundation**

**National Round I: Microeconomics**  
**Adam Smith Division**

1. Which of the following is true about an **increase** in the **economic rent** paid for land?
  - A. It can only result from an increase in the demand for land.
  - B. It can only result from a decrease in the supply of land.
  - C. It increases the cost of producing goods from society's perspective, but not from the perspective of the land user.
  - D. It plays only an incentive function, but not a rationing function.
  - E. It plays both an incentive and rationing function.
  
2. If a **perfectly-competitive firm** is producing where the **marginal revenue product of each input divided by the input's price is equal to 2**, then which of the following is true?
  - A. The firm is **not** producing its output with the least-costly combination of resources.
  - B. The firm is producing its output with the least-costly combination of resources, but is producing too **much** output for profit-maximization.
  - C. The firm is producing its output with the least-costly combination of resources, but is producing too **little** output for profit-maximization.
  - D. The firm is producing its output with the least-costly combination of resources and **is** producing the profit-maximizing amount of output.
  - E. The firm is producing its output with the least-costly combination of resources, but more information is necessary to determine if it is maximizing its profits.

3. Which of the following would cause an **outward-shift** of a country's **production possibilities** curve?
- A. A decrease in unemployment.
  - B. A decrease in natural resource prices.
  - C. An increase in consumer demand.
  - D. An increase in immigration.
  - E. Negative net investment.
4. **Cartels and similar collusive arrangements** are **harder** to establish and maintain when which of the following is true?
- A. Barriers to enter the industry are strong.
  - B. There is cyclical stability in the economy.
  - C. The cost conditions of the participating firms are similar.
  - D. The number of participating firms is small.
  - E. Individual sales of the participating firms are difficult to monitor.
5. Suppose drinking **hot chocolate** becomes a worldwide health craze. Which of the following would be an **expected result**?
- A. The demand for cocoa would decrease.
  - B. The demand for hot chocolate would decrease.
  - C. The price of cocoa would fall.
  - D. The supply of chocolate bars would decrease.
  - E. The price of hot chocolate would fall.
6. If a macaroni and cheese dinner is an **inferior** good, an **increase in the price** of such dinners would result in which of the following?
- A. An increase in the quantity of macaroni and cheese dinners demanded.
  - B. A decrease in the quantity of macaroni and cheese dinners demanded.
  - C. A decrease in the demand for macaroni and cheese dinners.
  - D. A positive substitution effect.
  - E. A positive income effect.

7. Consider the diagram to the right which shows the market for a good where  $S$  is the initial supply curve and  $S_t$  is the supply curve after an **excise tax is imposed**. Given this, the total amount of the **tax paid by consumers** is shown what area?
- $A + B + F$
  - $A + B$
  - $A + B + C$
  - $E + F$
  - $E + C$
8. Which of the following is **not true** given the **long-run average cost curve (LAC)** shown to the right?
- The minimum efficient scale is 100 units.
  - Producing 200 units of this good would be productively efficient.
  - Economies of scale exist up to producing 100 units.
  - Doubling output from 150 units to 300 units would less than double total costs.
  - If this good were produced by a competitive industry, the long-run price would equal \$10.
9. If a **monopoly** wanted to **maximize its total revenues**, it would do which of the following?
- Produce less output than if it was maximizing its profits.
  - Charge a lower price than if it was maximizing its profits.
  - Produce at an output level where marginal revenue is positive.
  - Produce where the demand for its good is inelastic.
  - Charge a price equal to its average cost.

10. Suppose there are **three to four gas stations** at the corners of some intersection. Which of the following would be **expected**?
- A. The price elasticity of demand for gasoline from a given station would be highly elastic.
  - B. The price elasticity of demand for gasoline from a given station would be highly inelastic.
  - C. The income elasticity of demand for gasoline would be highly positive.
  - D. The income elasticity of demand for gasoline would be highly negative.
  - E. The cross elasticity of demand for gasoline from a given station with respect to the price of one of the other stations would be highly negative.
11. The numerical data in the table below shows profits in millions of dollars. **Beta's profits are shown in northeast corner and Alpha's profits in the southwest corner of each cell.**

Given this **payoff matrix**, which of the following statements is **true**?

- A. Beta and Alpha are likely competitive firms.
- B. If Beta commits to a high-price policy, Alpha will gain the largest profit by also adopting a high-price policy.
- C. With independent pricing the outcome is likely to gravitate to cell A.
- D. With collusion, Beta and Alpha will likely take turns being the high and low-priced firm.
- E. If Beta and Alpha should collude, the payoff matrix shows that both have an incentive to cheat and lower their price.

12. Consider the table below in answering this question.

Number of Workers	Output	Highest Price at which all output can be sold
1	10	\$10
2	19	9
3	27	8
4	34	7
5	40	6

If the **wage rate for workers is \$20**, how many workers would a profit-maximizing firm facing these conditions hire?

- A. 1          B. 2          C. 3          D. 4          E. 5

13. Two firms, A and B, are emitting emissions of some pollutant. The tables below show the total benefits society would receive from reductions in these emissions and the total cost of reducing these emissions for each firm.

Number of Units Reduced	Total Benefits of Emissions Reductions	Total Cost of Emissions Reductions	
		Firm A	Firm B
1	\$35	\$16	\$10
2	65	36	22
3	90	62	36
4	110	95	52
5	128	135	70
6	144	185	90

Which of the following **emission taxes** would result in the **efficient** amount of emissions reduction?

- A. \$16          B. \$17          C. \$18          D. \$20          E. \$94

14. Between those **output levels** where **average variable cost is minimized and average total cost is minimized** which of the following is **true**?

- A. Marginal cost is falling.  
 B. Average total cost is rising.  
 C. Average variable cost and average fixed cost are both falling.  
 D. Average variable cost is rising faster than average fixed cost is falling.  
 E. Average fixed cost is falling faster than average variable cost is rising.

15. At a **price of \$4** a firm is able to sell **100 units** of its product. At a **price of \$5** it is able to sell **X** units. If the demand for its product is **elastic**, then which of the following is the **largest number of units that X could be**?
- A. 39.
  - B. 59.
  - C. 79.
  - D. 99.
  - E. 199.

**2006 NATIONAL ECONOMICS CHALLENGE**  
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**National Round II: Macroeconomics**  
**Adam Smith Division**

1. An **increase in the productivity** of capital goods along with a new law which **exempts interest on saving** from taxation, would do what to the **equilibrium** rate of interest and equilibrium quantity of **loanable funds**?

	<u>Rate of Interest</u>	<u>Quantity of Loanable Funds</u>
A.	Increase	Uncertain
B.	Increase	Decrease
C.	Uncertain	Increase
D.	Uncertain	Decrease
E.	Decrease	Increase

2. Over the long run, the rate of growth of **real earnings per worker** is fundamentally limited by the rate of growth of the economy's what?
- A. Total output.
  - B. Capital stock.
  - C. Money supply.
  - D. Output per worker.
  - E. International trade.
3. Why is the **short-run aggregate supply curve upward-sloping**?
- A. The interest rate effect.
  - B. The net export effect.
  - C. Higher price levels create incentives to expand output when resource prices remain constant.
  - D. Higher price levels create an expectation among producers of still higher price levels.
  - E. Nominal wages and other input prices are variable.

4. **Supply-side economists** argue that **changes in tax rates** have which of the following?
- A. No effect on tax revenues.
  - B. Little effect on aggregate supply.
  - C. Little effect on aggregate demand.
  - D. A greater effect on aggregate supply than on aggregate demand.
  - E. A greater effect on aggregate demand than on aggregate supply.
5. In a simple economy, three goods are produced: **100 apples, 20 shirts, and 2 bales of cotton** (which are used to produce the 20 shirts). If the price of apples is **\$2**, the price of shirts is **\$8**, and the price of cotton is **\$20 per bale**, what is the **nominal gross domestic product** of this economy?
- A. \$320.
  - B. \$360.
  - C. \$380.
  - D. \$400.
  - E. \$440.
6. Which of the following policies would **increase aggregate spending** but **not increase the size of government** in the process?
- A. Increase government spending and leave tax rates unchanged.
  - B. Decrease tax rates and leave government spending unchanged.
  - C. Increase tax rates and leave government spending unchanged.
  - D. Increase government spending and taxes by the same amount.
  - E. Decrease government spending and taxes by the same amount.
7. The **investment demand** curve will shift to the **left** as a result of which of the following?
- A. An increase in the real interest rate.
  - B. Businesses becoming more optimistic about future consumer spending.
  - C. An increase in the corporate income tax.
  - D. Good economic growth in nations which buy exports.
  - E. A decrease in excess productive capacity.

Consider the following diagram in answering questions 8 and 9. This shows the **aggregate expenditures** of a **closed** economy with a fixed (or autonomous) amount of investment and government spending.

8. What is the **indicated investment multiplier** for this economy?
  - A. 1.33
  - B. 2.50
  - C. 3.00
  - D. 4.00
  - E. 7.50
  
9. If the **economy is at Y**, which of the following is **true**?
  - A. Unplanned increases in inventories will occur.
  - B. Planned investment exceeds planned saving.
  - C. The economy is in short-run equilibrium.
  - D. Producers will likely increase production.
  - E. The economy will move towards equilibrium at Z.
  
10. **Monetary policy** intended to **increase real output** is **most effective** when which of the following is **true**?
  - A. The economy is at or near full employment.
  - B. The money multiplier is small.
  - C. Aggregate supply is elastic.
  - D. The economy is in a liquidity trap.
  - E. Investment demand is inelastic.

11. As the **price level rises** in an economy, which of the following is a likely result?
- A. Aggregate demand will shift to the right.
  - B. Aggregate supply will shift to the right.
  - C. The value of a savings account will rise.
  - D. The purchasing power of money will rise.
  - E. Aggregate expenditures will fall.
12. A commercial bank holds **\$500,000 in demand deposit liabilities and \$75,000 in reserves**. If the required reserve ratio is **10%**, what is the maximum amount this single bank can increase loans and what is the maximum amount by which the entire banking system can increase loans?

	<u>Single Bank</u>	<u>Entire Banking System</u>
A.	\$ 25,000	\$125,000
B.	\$ 25,000	\$250,000
C.	\$ 50,000	\$500,000
D.	\$125,000	\$600,000
E.	\$125,000	\$1,250,000

13. **Expansionary fiscal policy** in the short-run aggregate demand and aggregate supply model will result in which of the following?
- A. Inflation if aggregate supply is relatively flat.
  - B. Inflation if aggregate supply is relatively steep.
  - C. Inflation if aggregate demand is relatively steep.
  - D. Unemployment if aggregate demand is relatively steep.
  - E. Unemployment if aggregate supply is relatively flat.
14. **Expansionary monetary policy** tends to do all the following **except** for which one?
- A. Increase the crowding-out effect of expansionary fiscal policy.
  - B. Promote economic growth.
  - C. Increase exports.
  - D. Raise the price level.
  - E. Encourage investment spending.

15. Which of the following set of policies would be consistent in fighting **inflation**?

	<b>Government Tax Rates</b>	<b>Open Market Operations</b>	<b>Immigration Restrictions</b>
A.	Increase	Buy bonds	Relax
B.	Increase	Sell bonds	Increase
C.	Increase	Sell bonds	Relax
D.	Decrease	Buy bonds	Increase
E.	Decrease	Buy bonds	Relax

**2006 NATIONAL ECONOMICS CHALLENGE**  
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**National Round III: International and Current Events**  
**Adam Smith Division**

1. Which of the following describes what the **World Bank** does?
  - A. Lends money to developing nations for basic infrastructure projects.
  - B. Provides short-term loans to developing countries that are incurring balance of payments deficits.
  - C. Makes loans to private enterprises in developing countries.
  - D. Holds the official reserve assets of all countries engaged in international trade.
  - E. Facilitates the exchange of foreign currencies.
  
2. Which of the following would be recorded as a **debit in the capital account of Germany**?
  - A. A German entrepreneur builds an automobile assembly plant in Brazil.
  - B. A Japanese investor buys bonds from a German beer producer.
  - C. A U.S. citizen sends money to help support his grandparents in Berlin.
  - D. German tourists buy souvenirs in Mexico.
  - E. A German company imports silk from China.
  
3. The impact of **increasing** (as opposed to constant) **costs** is to do which of the following?
  - A. Enhances the comparative advantage that a nation may have in producing a good.
  - B. Expands the limits of the terms of trade.
  - C. Limits the extent to which a nation can gain from specializing in a particular good.
  - D. Leads to production possibilities curves which bow in towards the origin.
  - E. Makes gains from trade impossible.

4. Consider the **production possibilities** table below.

<b>Pizzas</b>	<b>24</b>	<b>20</b>	<b>16</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>0</b>
<b>Brownies</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>

If this country is able to trade at a **rate of one pizza for one brownie**, it could, **after specializing and trading**, consume all of the following combinations of pizzas and brownies **except** for which one?

- A. 20 pizzas and 3 brownies.
  - B. 16 pizzas and 9 brownies.
  - C. 12 pizzas and 12 brownies.
  - D. 8 pizzas and 15 brownies.
  - E. 6 pizzas and 18 brownies.
5. The diagram to the right shows the **production possibilities curve (P)** and the **consumption possibilities curve (C)** for a country after trade. Based on this, what is the country **specializing in producing** and what are the **terms of trade** indicated?
- A. Gadgets; 1 gadget = 1 widget.
  - B. Gadgets; 1 gadget = 2 widgets.
  - C. Widgets; 1 widget =  $\frac{1}{2}$  gadget.
  - D. Widgets; 1 widget = 1 gadget.
  - E. Widgets; 1 widget = 2 gadgets.
6. If the **Chinese yuan** is allowed to **appreciate faster** relative to the U.S. dollar (as the G7 nations have recently urged China to allow), which of the following would one expect to see?
- A. A smaller U.S. trade deficit with China.
  - B. More of your friends traveling to China.
  - C. An increase in U.S. imports from China.
  - D. Less Chinese investment in U.S. assets.
  - E. A financial panic in international foreign exchange markets.

7. **U.S. imports and exports** over the past twenty years have been doing what absolutely, as a percentage of U.S. GDP, and as a share of the total world trade?

	<u>Absolutely</u>	<u>Percentage of U.S. GDP</u>	<u>Share of Total World Trade</u>
A.	rising	rising	rising
B.	rising	rising	falling
C.	rising	falling	falling
D.	falling	falling	rising
E.	falling	falling	falling

8. In a controversial 2005 ruling (*Kelo v. New London*) the Supreme Court upheld the right of local governments to force private property owners to sell their property (**right of eminent domain**) for what "public use"?
- Parks.
  - Highways.
  - Cellular phone towers.
  - Private economic development.
  - Electricity transmission lines.
9. If Alpha has an **absolute advantage in producing apples** with respect to Omega while Omega has an **absolute advantage in producing oranges** with respect to Alpha, then which of the following is **true**?
- Trade between Alpha and Omega would not be mutually beneficial.
  - The opportunity cost of producing apples in Alpha is lower than it is in Omega.
  - Either Alpha or Omega could have the comparative advantage in producing apples.
  - Omega should specialize in producing apples.
  - Omega can produce more apples than Alpha given the same amount of resources.
10. Which of the following is **true** about a **limit on the amount of sugar** that can be imported into the U.S.?
- It is an example of a tariff.
  - It lowers the price of sugar in the U.S.
  - It harms U.S. sugar-beet producers.
  - It harms U.S. candy producers.
  - It would be a violation of U.S. anti-trust laws.

11. A sudden **decrease in the demand** for a country's **exports** (as recently experienced by Denmark) would result in which of the following?
- A. A fall in the country's aggregate demand, its prices, and its employment.
  - B. A fall in the country's aggregate demand and employment, but a rise in its prices.
  - C. A fall in the country's aggregate supply, its prices, and its employment.
  - D. An improvement in its trade balance.
  - E. An appreciation in its currency.
12. The **increased production** that results from specialization and trade:
- A. goes largely to the trader with the largest absolute advantage.
  - B. goes largely to the trader with the largest comparative advantage.
  - C. is shared equally by the traders.
  - D. is shared according to the terms of trade negotiated by the traders.
  - E. is shared according to the foreign exchange rates of the traders' countries.
13. As **U.S. interest rates increase** relative to those in the rest of the world, this is expected to result in which of the following?
- A. A stronger U.S. dollar.
  - B. Improved conditions for U.S. exporters.
  - C. A decrease in the flow of capital into the U.S.
  - D. Increase investment spending by firms in the U.S.
  - E. Smaller U.S. trade deficits.
14. The preliminary **real GDP increase for the first quarter of 2006** and **unemployment rate for February 2006** (the month right in the middle of that quarter) have what interesting relationship?
- A. They add up to exactly zero.
  - B. They add up to exactly 10.
  - C. They are exactly the same.
  - D. The real GDP increase is exactly half the unemployment rate.
  - E. The real GDP increase is exactly twice the unemployment rate.

15. Consider the diagram below which shows the **domestic demand and supply** for some good as well as the domestic price,  $P_{\text{domestic}}$ , and the world price,  $P_{\text{world}}$ .

If this **country opens itself to free trade** with respect to this good, which of the following is **true**?

- A. Domestic producers would be worse off by area  $a + b$ .
- B. Domestic producers would be better off by area  $a + b$ .
- C. Domestic consumers would be worse off by area  $a + b + c$ .
- D. The country would be better off by area  $b + c$ .
- E. The country would be worse off by area  $a$ .

**2006 NATIONAL ECONOMICS CHALLENGE**  
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**National Round IV: Quiz Bowl**  
**Adam Smith Division**

1. If an economy is operating at its natural rate of unemployment, which type of unemployment is equal to zero?  
**(cyclical)**
2. What is the Herfindahl Index for an industry with fifty equal-sized firms?  
**(200)**
3. If a regulatory agency uses "fair-return" pricing, it would set a firm's price equal to what?  
**(its average cost of production/average cost)**
4. What U.S. government agency is responsible for compiling the national income accounts?  
**(Commerce Department's Bureau of Economic Analysis)**
5. Any asset used in purchasing goods and services is called a what?  
**(medium of exchange)**
6. What happens to a monopolist's output level and profits if its fixed costs rise?  
**(output level stays the same; profits fall)**
7. What does a rising Gini coefficient for the United States indicate?  
**(increased income inequality)**

8. Under mercantilism, the principal objective of trade was thought to be to increase a nation's holdings of what?  
**(gold/gold and silver/precious metals)**
9. In analyzing an individual consumer's economic problem, what plays a role similar to that played by the production possibilities curve in analyzing society's economic problem?  
**(budget line/income constraint)**
10. Households, the federal government, or businesses--who contributed positively to national saving in 2005?  
**(businesses)**
11. At output levels greater than that which maximizes profits, what is the relationship between marginal revenue and marginal cost?  
**(MR < MC)**
12. What indicator of international financial market uneasiness has risen from around \$260 in 2001 to over \$700 this month?  
**(the price of an ounce of gold)**
13. When one says that the profits of corporations are subject to double taxation, what two taxes are they talking about?  
**(corporate income tax and personal income tax)**
14. The existence of successful ticket scalpers suggests that ticket prices were initially set too what?  
**(low)**
15. Adam Smith, David Ricardo, or John Maynard Keynes--who didn't believe Say's Law?  
**(John Maynard Keynes)**

16. If a price increase of 8% leads to a total revenue decrease of 4%, what is the value of the price elasticity of demand?  
**(1.5/technically, -1.5)**
17. If the current wage rate is \$18 an hour, the current CPI is 180, and the expected CPI next year is 190, what change in wages is needed to maintain workers' real wages next year?  
**(\$1 increase)**
18. What 19th-century economist has been called the "father of supply and demand"?  
**(Alfred Marshall)**
19. Private good, public good, or common resource--which is not rival in consumption?  
**(public good)**
20. To determine whether a foreign worker is truly cheaper to hire than an American worker, one must know the real wages of each worker plus what else?  
**(the productivity of each worker)**
21. The aggregate demand-aggregate supply model, unlike the simple aggregate expenditures model, accounts for changes in what?  
**(the price level/prices)**
22. Houses, hot dogs, or health care--which household purchase is not counted as a consumption expenditure in national income accounting?  
**(houses)**
23. If the price of a \$1000 bond which pays \$100 interest per year drops to \$800, the effective interest rate of the bond becomes what?  
**(12.5%)**

24. What prevents bank runs of the past where depositors would rush to withdraw money from banks with suspected financial problems?  
**(deposit insurance/the FDIC)**
25. If the per unit cost of producing 30 widgets is \$6 and fixed costs are \$30, what is the average variable cost of producing 30 widgets?  
**(\$5)**
26. What economic law is violated by a Giffen good?  
**(law of demand)**
27. A market failure is a failure of markets to do what?  
**(produce the efficient quantity of a good)**
28. According to the real-balance effect, an increase in the price level ultimately leads to a decrease in what?  
**(spending)**
29. If a competitive firm is selling 50 gadgets at \$6 each, what is the marginal revenue it would earn from selling one more gadget?  
**(\$6)**
30. What economic concept suggests that the statement: "Sellers always prefer higher to lower prices" may not always be the case?  
**(elasticity/price elasticity of demand)**

**Tie-breaking question (if necessary):**

Is expansionary fiscal policy most effective when the "crowding-out" effect is small or large?  
**(small)**