

**ECONOMICS 2**  
**SAMPLE FINAL EXAMINATION**

**PART I: MATERIAL SINCE THE 2<sup>ND</sup> MIDTERM**

**[48 POINTS TOTAL]**

**A. Short Answer**

Answer both questions. Be sure to explain your answers and to draw diagrams where they are appropriate. Note: We have given you a full page for each answer so that you have plenty of room to write. We do **not** expect answers to take up the whole space.

1. Suppose the economy begins in long-run equilibrium, and that the central bank changes its reaction function so that at a given inflation rate, it sets a higher real interest rate than before. How, if at all, will this development affect inflation in the long run? **[9 points]**
2. Suppose that British goods become more popular with American consumers. How would you expect this development to affect the price of U.S. dollars in British pounds? **[9 points]**

**B. Problem**

Answer all parts of the question. Be sure to explain your answers and to draw diagrams where they are appropriate. Your explanation and analysis determine your grade.

3. Suppose that the economy is in long-run equilibrium and that there is a permanent reduction in government purchases? (**Note:** In parts (a) and (b) of this question, assume for simplicity that there is no foreign trade or asset flows.)
  - a. How will this development affect output, consumption, and investment in the short run? **[10 points]**
  - b. How will this development affect investment in the long run? **[10 points]**
  - c. How will this development affect net exports in the long run? (**Note:** For this part, you obviously need to expand the analysis to include international trade and asset flows.) **[10 points]**

**PART II: SHORT ANSWER**

**[28 POINTS TOTAL]**

Answer all questions. Be sure to explain your answers and to draw diagrams where they are appropriate. Note: We have given you a full page for each answer so that you have plenty of room to write. We do **not** expect answers to take up the whole space.

4. Explain why a binding price ceiling is likely to lead to a misallocation of consumption among consumers but not to a misallocation of production among producers. **[9 points]**
5. Suppose that there is international trade, and that because of developments abroad, the world price of avocados (relative to other goods and services) rises. Show using a PPC/CPC diagram (with avocados on the horizontal axis and everything else on the vertical axis) how this would affect U.S. production of avocados and other goods and services. **[10 points]**
6. Consider a good that is produced by a monopolist. How would a per unit tax (physically collected from the monopolist) affect consumer surplus? **[9 points]**

**PART III: PROBLEMS**

**[80 POINTS TOTAL]**

Answer all parts of each question. Be sure to explain your answers and to draw diagrams where they are appropriate. Your explanation and analysis determine your grade.

7. Suppose the government undertakes a large spending program to build community colleges and to make higher education free for many low-income families.
  - a. How would you expect the program to affect output in the short run? **[10 points]**
  - b. Assuming that the program succeeds in increasing the skills of some workers, how would you expect it to affect normal output per person in the long run? **[10 points]**
  - c. Again assuming that the program succeeds in providing high skills to some workers who would otherwise have been low-skilled, how would you expect it to affect inequality in the long run? **[10 points]**
8. The wage of many workers in the entertainment industry is determined by a negotiated wage that is above the level where the quantity supplied and the quantity demanded are equal. Suppose that because of a decline in the power of unions, this negotiated wage falls (but remains above the level where the quantity supplied and the quantity demanded are equal).
  - a. How would this development affect employment in the entertainment industry? **[10 points]**
  - b. Entertainment is a product that the United States both consumes domestically and exports. How would the development in part (a) affect the production and consumption of entertainment in the United States and our exports of entertainment? **[10 points]**
  - c. Continue to assume that entertainment is a product that the United States both consumes domestically and exports. What effect, if any, will the fall in the negotiated wage have on the profits of a typical U.S. entertainment firm in the short run? **[10 points]**

9. Consider a competitive industry for a good that has a negative externality.
- How does the amount produced in the absence of any government policy compare with the amount that would maximize the total social surplus? Identify the total private surplus, external costs, and total social surplus both at the level of production that occurs without government intervention and at the level of production that maximizes the total social surplus. What is the deadweight loss in the absence of government intervention? **[10 points]**
  - Suppose that, for political reasons, the government decides to subsidize the production of this good even though it has a negative externality. The subsidy is a per unit subsidy that is physically paid to sellers. What is the deadweight loss in this case? **[10 points]**

**PART IV: MULTIPLE CHOICE**

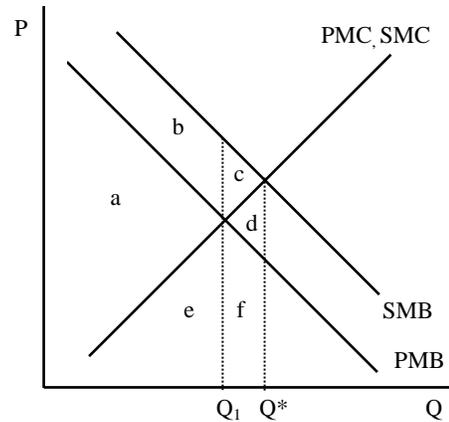
**[44 POINTS TOTAL]**

Circle the **best** answer to each question. Each question is worth 2 points.

10. If output is below its normal or potential level, the way that it gets back to normal is that over time:
- firms cut their prices, leading utility-maximizing households to increase their demand for goods and services.
  - firms raise their prices by less than before, leading the central bank to lower the real interest rate, thereby increasing planned aggregate expenditure.
  - the pressures on firms from lower sales lead to increased innovation, which improves technology and so raises output.
  - unemployed workers drop out of the labor force, thereby reducing normal output until it equals actual output.
11. If the CEO of a company orders department managers to do their own copying in an effort to save costs, you might worry that the CEO did not understand:
- externalities.
  - interest rates.
  - utility maximization.
  - comparative advantage.
  - supply and demand.
12. If the price of good x is twice the price of good y, a utility-maximizing household will:
- buy twice as many units of good x as of good y.
  - buy half as many units of good x as of good y.
  - spend twice as much on good x as on good y.
  - spend half as much on good x as on good y.
  - buy so that it gets twice as much utility from good x as from good y.
  - buy so that it gets half as much utility from good x as from good y.
  - buy so that the marginal utility of good x is twice as large as the marginal utility of good y.
  - buy so that the marginal utility of good x is half as large as the marginal utility of good y.
13. We can rewrite the condition that quantity of dollars demanded equals the quantity of dollars supplied in the market for foreign exchange as:
- the value of American goods, services, and assets that foreigners buy equals the value of foreign goods, services, and assets that Americans buy.
  - American exports plus capital inflows equals American imports plus capital outflows.
  - American net exports plus net capital inflows equal zero.
  - all of the above.
14. If an industry that had been perfectly competitive becomes a monopoly:
- the price of the good will rise.
  - the quantity of the good will rise.
  - producer surplus will rise.
  - consumer surplus will rise.
  - (a) and (b).
  - (a) and (c).
  - (b) and (d).
  - (c) and (d).
  - (a), (b), and (c).
  - (b), (c), and (d).
15. When government purchases (G) rise by 1, the reason that output (Y) rises by more than 1 in the short run is:
- consumer confidence increases, thereby causing consumption at a given level of disposable income to be higher than before.
  - the Federal Reserve cuts interest rates, thereby increasing planned investment.
  - the dollar depreciates, thereby increasing net exports.
  - all of the above.
  - none of the above.

16. At  $Q^*$  in the diagram to the right, private surplus is:

- a. a.
- b.  $a+b+c+d$ .
- c.  $a+b+c-d$ .
- d.  $a-d$ .
- e.  $a+b+c+d-e-f$ .
- f.  $a+b+c-d-e-f$ .



17. If you wanted to think about the tradeoff the United States faces between national security and other things that we value, the tool you would want to start with is:

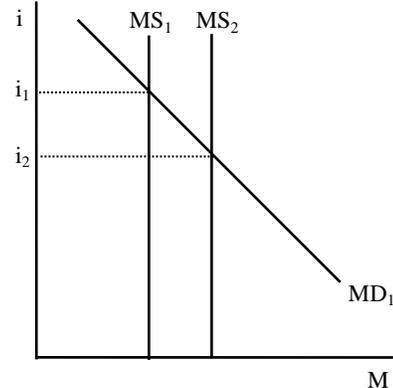
- a. a supply and demand diagram for national security.
- b. the condition for utility maximization—that is, the marginal utility of national security divided by the price of national security equals the marginal utility of everything else divided by the price of everything else.
- c. an aggregate production function showing total output per person as a function of the employment-to-population ratio, capital per worker, technology, and how secure the country is.
- d. a production possibilities curve with national security on one axis and everything else on the other.

18. If the nominal interest rate is 25% per year, the present value of \$100 to be received two years from now is:

- a.  $1.25^2 \cdot \$100$ .
- b.  $1.25 \cdot \$100$ .
- c. \$100.
- d.  $\$100/1.25$ .
- e.  $\$100/1.25^2$ .
- f.  $\$100/(1 - 0.25 - 0.25)$ .
- g.  $\$100/125$ .

19. The diagram to the right shows the effects of:

- a. an open-market purchase by the Federal Reserve of bonds in exchange for currency.
- b. an open-market sale by the Federal Reserve of bonds in exchange for currency.
- c. an increase in the supply of saving at a given real interest rate.
- d. an increase in investment demand at a given real interest rate.



20. In the short run, a decision by the Federal Reserve to raise the real interest rate at the current rate inflation rate will cause:

- a. the dollar to appreciate and U.S. net exports to rise.
- b. the dollar to appreciate and U.S. net exports to fall.
- c. the dollar to depreciate and U.S. net exports to rise.
- d. the dollar to depreciate and U.S. net exports to fall.

21. If the Federal Reserve reduces the money supply, in the short run:

- a. both the nominal and the real interest rate will fall.
- b. both the nominal and the real interest rate will rise.
- c. the nominal interest rate will fall, but the real interest rate will not change.
- d. the real interest rate will fall, but the nominal interest rate will not change.
- e. the nominal interest rate will rise, but the real interest rate will not change.
- f. the real interest rate will rise, but the nominal interest rate will not change.

22. In the long run, output:

- a. equals planned spending, and planned spending can be less than, greater than, or equal to potential output.
- b. equals planned spending, and planned spending adjusts to equal potential output.
- c. need not equal planned spending, and can be less than, greater than, or equal to potential output.

- d. need not equal planned spending, and is equal to potential output.
23. If the minimum wage rises from \$10 per hour to \$11 per hour and the Consumer Price Index rises from 200 to 220, the real (or inflation-adjusted) minimum wage has:
- risen by 10%.
  - risen by 1%.
  - not changed.
  - fallen by 10%.
24. Suppose the owner of a firm does not pay himself or herself a salary. In computing the economic profits of the firm, the time the owner works at the firm should be valued at:
- zero.
  - the minimum wage.
  - the opportunity cost of the owner's time.
  - the average wage of the firm's employees.
25. The imposition of a per unit tax on a good that is physically collected from the seller will:
- decrease the price paid by consumers.
  - decrease the quantity of the good bought and sold.
  - (a) and (b).
  - none of the above.
26. For a person choosing between a job paying \$50,000 a year and one-year master's program with a tuition of \$30,000, the opportunity cost of the master's program is:
- \$20,000.
  - \$30,000.
  - \$50,000.
  - \$80,000.
27. A competitive firm produces at the point where price is equal to marginal cost:
- to maximize its market share.
  - because if it produced more, it would have to cut the price of its product.
  - because that point always yields positive economic profits.
  - none of the above.
28. Marginal revenue for a monopolist:
- is not affected by shifts of the demand curve.
  - is equal to the market price.
  - declines more rapidly than price as the quantity sold increases.
  - depends on marginal cost.
  - does not exist.
29. The reason that the marginal revenue product of labor at a competitive firm falls as the amount of labor increases is:
- workers have to be paid more if they work more hours.
  - as the firm produces more, the price it gets for its product falls.
  - as the amount of labor increases, the amount each additional worker contributes to output falls.
  - (a) and (b).
  - (a) and (c).
  - (b) and (c).
  - All of the above.
30. If there is a rightward shift of the supply curve in a competitive market, total spending on the good rises:
- always.
  - never.
  - if the price elasticity of supply is less than 1.
  - if the price elasticity of supply is greater than 1.
  - if the price elasticity of demand is less than 1.
  - if the price elasticity of demand is greater than 1.
31. If a typical German worker can produce 1 car or 3 tons of steel per day and a typical American worker can produce  $\frac{1}{2}$  car or 4 tons of steel per day, the range of relative prices for a car where both countries will want to trade is:
- between 3 and 8 tons of steel per car.
  - between 3 and 4 tons of steel per car.
  - between  $\frac{1}{3}$  and  $\frac{1}{2}$  ton of steel per car.
  - since the two countries have different opportunity costs, each country will trade the good for which it has the lower opportunity cost in exchange for the other good no matter what the relative price of a car is.
  - there is no relative price of cars that will make the countries want to trade.