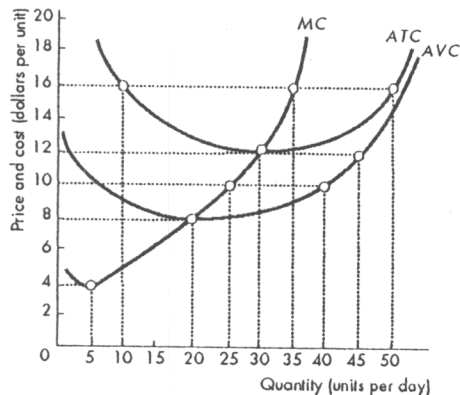


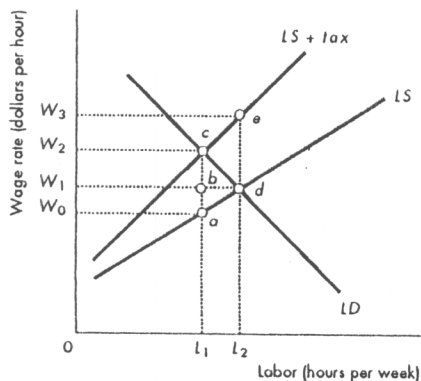
Part I: Multiple Choice Questions.

(2 points each, 70 points total, NO deductible)

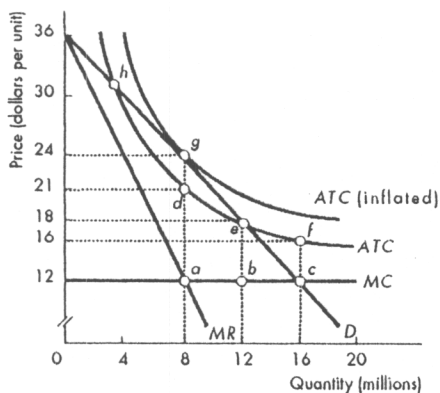


- In the above figure, the vertical distance between the ATC and AVC curves is
 - the total cost.
 - the average fixed costs.
 - the marginal cost.
 - None of the above answers are correct.
- In the above figure, given a market price of \$16, the profit maximizing firm will
 - produce 10 units.
 - produce 50 units.
 - produce 35 units.
 - choose not to produce.
- In the above figure, given a market price of \$12, the profit maximizing firm will have an economic profit
 - of zero, that is, it will break even with a normal profit.
 - of more than \$100.
 - that is negative, that is, it will have an economic loss.
 - of less than \$100 but more than \$0.
- In the above figure, at any price between \$8 per unit to \$12 per unit, how many units will the profit maximizing firm produce?
 - None, because the producer will never choose to operate at a loss.
 - More than 30, because variable costs are covered so that the producer can earn economic profits.
 - Between 20 and 30, because variable costs are covered so the firm's losses will be minimized by producing rather than shutting down.
 - Less than 20 because this will reduce marginal cost.

- 9) Which of the following combinations of conditions will cause the demand for labor to be more elastic?
- A) The production process is capital-intensive; demand for the product is inelastic; and it is difficult to substitute capital for labor
 - B) The production process is labor-intensive; demand for the product is elastic; and it is easy to substitute capital for labor
 - C) The production process is labor-intensive; demand for the product is inelastic; and it is easy to substitute capital for labor
 - D) The production process is capital-intensive; demand for the product is elastic; and it is difficult to substitute capital for labor



- 10) The above figure illustrates the effect of an income tax. How much revenue does the government collect with the income tax illustrated above?
- A) W_0W_2ca
 - B) acd
 - C) W_1W_3ed
 - D) W_0W_1ba
- 11) The above figure illustrates the effect of an income tax. How much is the deadweight loss borne by society when the government imposes the tax?
- A) dec
 - B) bcd
 - C) abd
 - D) dca
- 12) The above figure illustrates the effect of an income tax. The tax is paid by both the employers and workers. The amount of the tax paid by the workers would be
- A) greater if the elasticity of demand for labor was more elastic.
 - B) greater if the elasticity of supply of labor was more inelastic.
 - C) Both answers A and B are correct.
 - D) Neither answer A nor B is correct.



- 13) In the above figure, if the natural monopoly is not regulated, then consumer surplus is
 A) \$192 million. B) \$108 million. C) \$60 million. D) \$48 million.
- 14) In the above figure, if regulators intervene in this natural monopoly market and a marginal cost pricing rule is followed, then the firm will
 A) produce 12 million units and breakeven with a normal profit.
 B) produce 16 million units and incur an economic loss of \$64 million.
 C) produce 8 million units and earn an economic profit of \$24 million.
 D) produce 16 million units and breakeven with a normal profit.
- 15) In the above figure, if the natural monopoly is regulated and a marginal cost pricing rule is followed, then the consumer surplus will be
 A) \$108 million. B) \$48 million. C) \$60 million. D) \$192 million.

Component	Dollars (billion)
Personal income taxes	500
Social insurance taxes	400
Corporate income taxes	150
Indirect taxes	75
Transfer payments	1,200
Purchases of goods and services	225
Debt interest	75

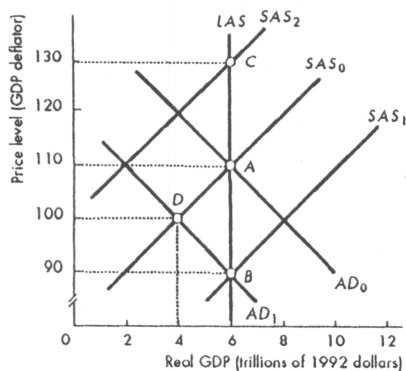
- 16) Consider the above table with data for a country's government budget. The country has government revenues of ___ billion.
 A) \$1125 B) \$1700 C) \$900 D) \$725
- 17) Consider the above table with data for a country's government budget. Government expenditures for the economy equal ___ billion.
 A) \$1500 B) \$1275 C) \$1200 D) \$1425
- 18) Consider the above table with data for a country's government budget. The data show the government is running a ___ billion.
 A) budget surplus of \$650 B) budget deficit of \$550
 C) budget surplus of \$300 D) budget deficit of \$375

- 19) Suppose the full-employment level of real GDP is \$900 billion, while the current level of real GDP is \$700 billion. There are no income taxes or international trade. The marginal propensity to consume is 0.8. In what direction and by what amount must lump-sum taxes change by to achieve the full employment level of GDP?
- A) Increase lump-sum taxes by \$80 billion
 B) Decrease lump-sum taxes by \$100 billion
 C) Decrease lump-sum taxes by \$50 billion
 D) Increase lump-sum taxes by \$40 billion
- 20) Suppose a country has no international trade, no income taxes, and a MPC of 0.8. If lump-sum taxes are increased by \$40, what happens to equilibrium expenditure in the short run while prices are constant?
- A) increase \$40
 B) decrease \$40
 C) decrease \$160
 D) increase \$200
- 21) In the short run, in an economy with no imports, the lump-sum transfer payments multiplier is
- A) $-MPC/MPC$.
 B) $1/(1 - MPC)$.
 C) $MPC(1 + MPC)$.
 D) $MPC/(1 - MPC)$.

TBK Bank Balance Sheet			
Assets		Liabilities	
Reserves	\$120	Deposits	\$600
Loans	580	Net worth	100
Total as-sets	\$700	Total liabilities	\$700

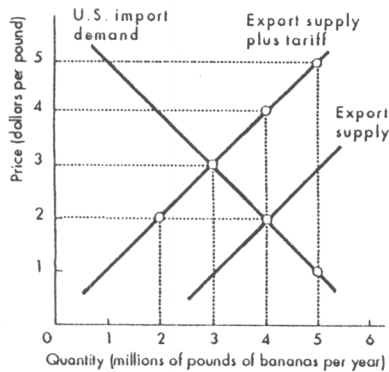
- 22) The above table presents the balance sheet of the TBK commercial bank. What is this bank's actual reserve ratio?
- A) 20 percent
 B) 17.14 percent
 C) \$700
 D) \$120
- 23) The above table presents the balance sheet of the TBK commercial bank. If the required reserve ratio is 25 percent, what is this bank's required reserves?
- A) \$150
 B) \$120
 C) 20 percent
 D) \$175
- 24) Which of the following would occur if the Fed buys \$10 million of securities from the University National Bank?
- A) The University National Bank has \$10 million less in excess reserves.
 B) The University National Bank has \$10 million more in securities.
 C) The Fed will credit the University National Bank's deposit account with the Fed by \$10 million.
 D) The Fed will debit the University National Bank's deposit account with the Fed by \$10 million.
- 25) Read the following statements and determine if they are true or false.
- I. Open market operations are more effective at changing the money supply when the Fed works through a commercial bank, as opposed to the general public.
 II. The Federal Reserve Board of Directors meets approximately every six weeks to review the state of the economy and determine monetary policy.
- A) I is true and II is false
 B) I and II are both false
 C) I is false and II is true
 D) I and II are both true
- 26) The money multiplier determines how much
- A) real GDP will be expanded given an increase in autonomous investment.
 B) money demand will expand given a change in the quantity of money.
 C) the quantity of money will be expanded given a change in the monetary base.
 D) the monetary base will be expanded given a change in the quantity of money.

- 27) A currency drain
 A) causes an increase in excess reserves.
 B) decreases the effect an open market operation has on changing the quantity of money.
 C) causes an increase in required reserves.
 D) causes an increase in deposits.
- 28) According to Keynesian theory,
 A) when real GDP is either above or below potential GDP, prices and wages change rapidly, and return the economy to full employment.
 B) when real GDP is below potential GDP, prices and wages rise very slowly, and return the economy to full employment.
 C) when real GDP is above potential GDP, prices and wages rise very slowly, and return the economy to full employment.
 D) None of the above answers are correct.
- 29) According to monetarists, the key determinant of expansions and recessions is
 A) the ineptitude of politicians to enact appropriate fiscal policies.
 B) the rate of growth of the quantity of money.
 C) the rate of change in interest rates.
 D) All of the above answers are correct.



- 30) In the above figure, the economy is initially at point A. Which point best represents the short-run response to a decrease in the growth rate of the quantity of money, according to the monetarists?
 A) D
 B) A, that is, there is no change.
 C) C
 D) B
- 31) In the above figure, the economy is initially at point A. Which point best represents the long-run response to a decrease in the growth rate of the quantity of money, according to the monetarists, and assuming no further changes?
 A) D
 B) C
 C) A
 D) B

- 32) Country A and country B both consume and produce only food and clothing. Both countries use only labor to produce these two products. A worker in country A can produce 6 units of clothing or 10 units of food each day while a worker in country B can produce 4 units of clothing or 8 units of food. Which of the following statements is true?
- A) The opportunity cost of clothing production in country B is less than that of country A.
 B) The opportunity cost of food production in country A is the same as that of country B.
 C) The opportunity cost of clothing production in country A is greater than that of country B.
 D) The opportunity cost of food production in country A is greater than that of country B.
- 33) A tariff imposed by the U.S. on Japanese cars
- A) increases the equilibrium price and decreases the equilibrium quantity of Japanese cars imported into the U.S.
 B) decreases the equilibrium price and decreases the equilibrium quantity of Japanese cars imported into the U.S.
 C) decreases the equilibrium price and increases the equilibrium quantity of Japanese cars imported into the U.S.
 D) increases the equilibrium price and increases the equilibrium quantity of Japanese cars imported into the U.S.



- 34) In the above figure, if a tariff of \$2 per pound of bananas is imposed, the equilibrium price of imported bananas will be
- A) \$5.00 per pound. B) \$3.00 per pound. C) \$4.00 per pound. D) \$2.00 per pound.
- 35) In the above figure, what is the size of the quota required to cause the quantity of bananas imported to be the same as the quantity imported with a \$2 tariff in place?
- A) 4 million pounds B) 1 million pounds C) 3 million pounds D) 2 million pounds

Part II (30 points) This question is to illustrate the nature of the public good. Suppose that two Bohemian roommates with identical preferences derive utility from the number of paintings hung on their hovel's walls (X) and on the number of granola bars (Y) they eat. The specific form of the utility function is given by

$$U_i(X, Y_i) = X^{1/3} Y_i^{2/3} \quad \text{for } i = 1, 2.$$

Notice that utility for each person depends on the total number of paintings hung and on the number of granola bars each person consumes individually. We assume that each roommate has \$300 to spend and that $P_X = \$100$, $P_Y = \$0.2$.

- (a) (5%) When the roommates live together, however, each must think about what the other will do. Each could, for example, assume the other will buy the paintings. In this case, what are X and each's utility level?
- (b) (10%) Alternatively, person 1 might assume that person 2 will buy no paintings and he or she would choose to purchase one. In this case, what are their respective utility levels? Who is on a free rider position? Finally, prove that this case is inefficient by showing the total number of granola bars they are willing to sacrifice for one more painting is higher than the cost of one painting (in terms of granola bars).
- (c) (10%) Calculate the efficient level of painting purchases. Assuming the roommates split the cost of the paintings and use their remaining funds to buy granola bars, what utility level will each receive?
- (d) (5%) Suppose now that each person lived alone. What proportion of their income will be on paintings (X) and on granola bars (Y), respectively?