

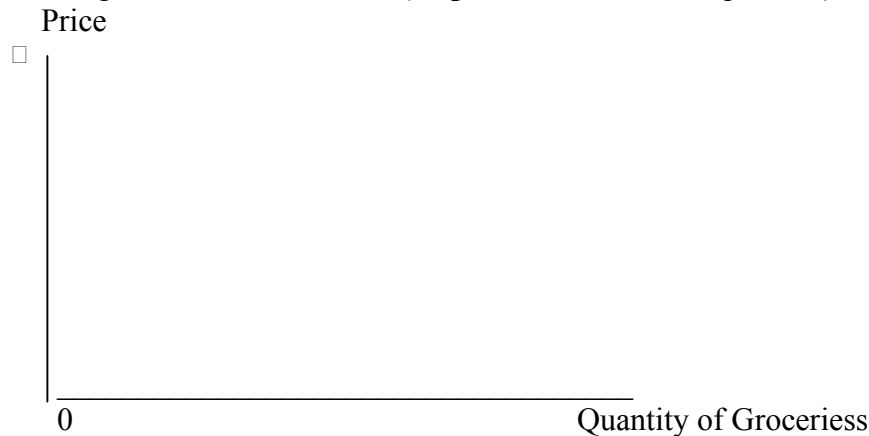
1. Consider grocery stores in an area mainly populated by elderly people. People who live in this neighborhood shop there because they cannot afford to go to a different area.

A. Define the term "**price elasticity of demand**".

B. **Based on the three factors** that determine whether the demand for a product is relatively elastic or relatively inelastic, would the demand for groceries in this area be relatively elastic or relatively inelastic? **EXPLAIN WHY.**

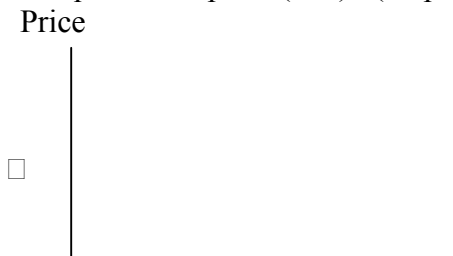
C. In the space below, **draw** the demand and supply curves for groceries in this area. Be sure to draw the demand curve **as you described it in part B**. Draw a normal supply curve. Show the equilibrium price and quantity.

D. Finally, on the graph that you have drawn, show the results of **an increase in the amount of money paid to elderly people** in their social security checks. **Explain why** you made the changes that you did. What happens to grocery prices as a result of the increase in social security benefits? What happens to the quantity of groceries available? **(15 points for the entire question)**

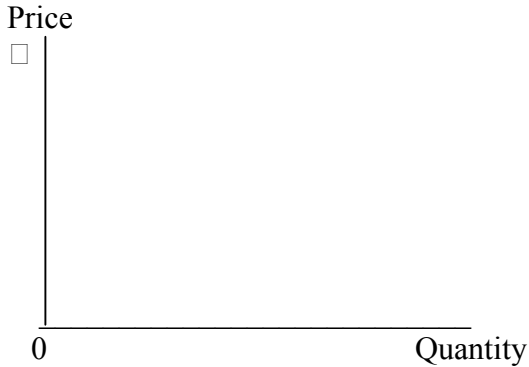


2. The fundamental problem faced by all economies is called _____ .
(1 point)

3. **Three main questions** that every economy must answer are: (3 points)
- 1.
 - 2.
 - 3.
4. Define the term "**capital**" and give an example of anything that would be classified as capital: (3 points)
5. Define the term "**opportunity cost**". You decide to take an additional class this semester. It meets every Friday night and Saturday morning. What is the **full** opportunity cost of your decision? (3 points)
6. In this course, a procedure for making **rational decisions** was presented. Briefly describe this procedure. Illustrate your answer by using this procedure to determine how long you will attend college. Consider the choices as: (1) attending college at all; (2) completing a two year degree or certificate; (3) completing a Bachelors Degree; (4) completing a Masters' Degree and (5) completing a Ph.D. (3 points)
7. What does the following statement **mean**: "the demand for Product X is more inelastic than the demand for Product Y"? (2 points)
8. What does the following statement **mean**: "the demand for Product X is perfectly inelastic"? (2 points)
9. What is a **price ceiling**? Show the situation on a graph. Apply the example of price ceilings to the following case. Because most people have health insurance, they will pay a flat fee for a visit to the doctor. For example, they will pay \$10 per visit. The doctor charges \$50 (the equilibrium price), but the insurance company pays the other \$40. Use the example of a price ceiling to explain what results when the price (\$10) is held below the equilibrium price (\$50). (10 points)



10. What is a **price floor**? Use the case of agricultural price supports presented in the class to **explain the results** of a price floor. Show the situation on the graph. (5 points)



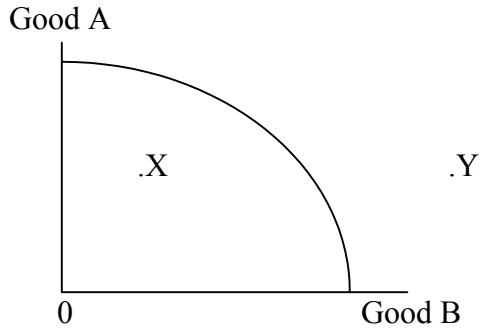
11. We have considered the process that has been called **the "invisible hand"**. Use the "invisible hand" argument to explain what will result if there is a change in consumers' tastes so that consumers prefer to see less violence on television. In your answer, be sure to **specify the two functions of the price**.

Then, use the "invisible hand" argument to explain what will result from the increase in the price of electrical power charged by power producers to companies that sell electricity, such as SDG&E. In your answer, be sure to **specify the two functions of the price**. (10 points for the entire question)

12. What is the **law of diminishing (marginal) productivity**? Why is it true? (5 points)

13. If the marginal physical product is falling, the marginal cost must be _____ (rising or falling?). (1 point)

14. Below is a **production possibilities curve**. First, what does it show? (3 points)



Second, why does it have the bowed shape that it has? (3 points)

Third, what does point X show? (2 points)

Fourth, what does point Y show? (2 points)

15. Define the term "**economies of scale**". Then, use this term to explain why a company like Costco or Wal-Mart can sell for lower prices than smaller stores. (3 points)

16. Quantity Total Cost Marginal Cost Price (6 points)

0	\$400		
1	450		\$100
2	510		100
3	580		100
4	660		100
5	750		100
6	850		100
7	960		100
8	1080		100
9	1210		100

Fill in the table. The quantity that should be produced is _____.

The economic profits are equal to \$_____.

Since the economic profits are negative, in the short-run, should the company continue to produce or shut-down? Why?

17. A person took \$1,000,000 out of a savings account to start a business. The savings account had been paying an interest rate of 5%. The person also quit a job to work in the business; the job had been paying \$50,000 per year. During the year, the capital cost \$100,000, the hired labor cost \$300,000, and the natural resources cost \$200,000. In the year, the sales revenue was \$800,000.

The **explicit costs** were equal to \$ _____

The **implicit costs** were equal to \$ _____

The **fixed costs** were equal to \$ _____

The **variable costs** were equal to \$ _____

The **economic profits** were equal to \$ _____
SHOW ALL CALCULATIONS. (10 points)

18. Define each of the following market structures (2 points each)

- a. Perfect Competition
- b. Pure Monopoly
- c. Oligopoly
- d. Monopolistic Competition

1. The price elasticity of demand is the percentage change in quantity demanded divided by the percentage change in price.

The demand for groceries would probably be inelastic, as there are few substitutes and the products do not take a high percent of most people's incomes.

If you said "inelastic", the curves should be steep. If "elastic", the curves should be flat.

The rise in social security benefits should be treated as an increase in income. This will shift demand to the right, but not shift supply. There will be a shortage, causing prices to rise. The quantity of groceries will also increase.

2. scarcity 3. what to produce; how to produce; for whom to produce

4. Capital is made by people for the purpose of being used in production ---chairs, buildings, white boards, computers, etc. --- any machine, equipment, building, etc.

5. Opportunity cost is the value sacrificed whenever a decision is made. Do not use the word "cost" to define cost! The full cost includes money expenses, such as gasoline, parking fees, tuition, etc., and the value of whatever would have been done on those days (including time spent studying).

6. Take the units one-at-a-time. In each case, ask: "what is the marginal benefit and what is the marginal cost"? If the marginal benefit is greater than the marginal cost, choose it and go-on to ask about the next unit. If the marginal benefit is less than the marginal cost, don't do it and stop. Should you go to college for one year? The marginal benefit is the additional income you expect you receive (+ other benefits). The marginal cost is the money charges and the value of the time sacrificed. If you expect the marginal benefit is greater, go for one year. Continue the procedure for the second degree. When the expected marginal benefit of another degree is less than the opportunity cost, stop going to college.

7. If the price of Product X and Y both rise by the same percent, the quantity demanded will decrease less for Product X.

8. If the price of product X rises, the quantity demanded of X will stay the same.

9. A price ceiling means that the price is held below equilibrium. As a result, quantity demanded is higher and quantity supplied is lower. There are shortages. Rationing is done by first-come, first-served or by seller (doctor) choice. There would not be black or gray markets (other charges or less product) in this case, as the insurance company is paying the doctor. See the graph in the text.

10. A price floor means that the price is held above equilibrium. As a result, quantity demanded is lower and quantity supplied is greater. There are surpluses. The surpluses are stored and then sold to other countries at below market prices or given away. Farmers win while taxpayers and consumers lose.

11. The decision of "what to produce" is made by buyers' tastes (backed up by income). You could show this --- with the graphs--- as a change in tastes for less violence. The price of shows with less violence will rise (the price is charged to advertisers) because more people will watch. Sellers will respond by producing more shows with less violence.

The decision of "what to produce" is also made according to the relative scarcity of factors of production. You could show this by having electric power become more scarce. The price will rise, given consumers incentives to conserve on a resource that has become scarce. The price provides information to both buyers and sellers and also provides incentives to do what is socially desirable (i.e., to produce what buyers desire or to conserve on scarce factors). Acting in one's self-interest leads to behaviors in the social interest.

12. If one factor is fixed, then as more of the variable factor is added, beyond some point, the addition to production (marginal physical product) diminishes. This occurs due to the limited amount of capital.

13. rising

14. The line shows the trade-off between good A and good B. If resources are used to produce one of the goods, then less of the other good will be produced. The bowed shape is due to increasing marginal costs. This results because productive resources are specialized. X is inefficient. Y is not attainable.

15. Economies of scale: as the quantity produced increases, the size of the plant increases, and the minimum point on the average cost falls (i.e., the long-run average cost is falling). This occurs because of a technology where large stores, with high fixed costs, can spread the fixed costs over so many units that the cost per unit is lower than can possibly be achieved in smaller stores.

16. The quantity is 6 where the price equals the marginal cost. The marginal cost is the change in the total cost of producing one more unit. The economic profits equals (6 times 100) minus the total cost of \$850 = minus 250. Continue to produce because the fixed costs are sunk. The fixed costs equal \$400. It is better to lose 250 than to lose 400.

17. Explicit costs: $\$100,000 + \$300,000 + \$200,000 = \$600,000$

Implicit costs: $\$50,000 + 5\% \text{ of } \$10,000,000 = \$100,000$

Fixed costs: $\$100,000 + \$100,000 = \$200,000$

Variable Costs: $\$300,000 + \$200,000 = \$500,000$

Economic profit: $\$800,000 - \$700,000 = \$100,000$

18. Perfect Competition: so many sellers that no one can affect the price; perfect information, no barriers to entry; identical products

Pure Monopoly: one seller; high barriers to entry; relatively inelastic demand

Oligopoly: few sellers; high barriers to entry; relatively inelastic demand

Monopolistic Competition: one seller but many close substitutes; differentiated products, good information; no barriers to entry

Economics 102
Spring 1999
Examination #2

Name _____
Total Score _____

1. In the philosophy of the market system (i.e., **laissez faire**), what are the appropriate functions for government? Why must these be done by government? Be sure to define all technical terms. (15 points)

2. What is the **law of diminishing marginal utility**? Be sure to define "marginal" and "utility" and explain how utility is measured. (5 points)

3. Use the law of diminishing marginal utility to explain why diamond, which is relatively unimportant, is much more expensive than water, which is essential to life. (5 points)

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6. "A company earned an **economic profit of zero**." Explain what this means. (2 points)

If the company sells in perfect competition and the market price is \$100, to maximize its profits, this company should produce _____ units. (5 points)

SHOW ALL CALCULATIONS.

11. Define the term "**economies of scale**" and explain why they exist. (3 points)

Define the term "**minimum efficient scale**". (2 points)

12. Japanese steel companies made economic losses for many years. Yet, they continued to produce steel. Explain why a company would continue to produce, even though they are making economic losses. (3 points)

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13. **Briefly define** the following terms: (3 points each)

1. Perfect Competition

2. Pure Monopoly

3. Monopolistic Competition

4. Oligopoly

14. In the space below, draw the average fixed cost, the average variable cost, the average total cost, the marginal cost, and the marginal revenue (for a company in perfect competition). Be sure that they are in proper relation to each other. On the graph, show the profit-maximizing quantity and the economic profits. (10 points)

□\$



1. Government provides the rules, such as property rights, contract laws, etc. It promotes or maintains competition. It provides information to markets. It provides public goods (those for which one can be a free rider, which are non-rival, and which are indivisible), controls negative externalities and subsidizes positive externalities (effects on others not considered by the decision-maker), provides certain merit goods (private goods which government wants people to have, such as health care), and redistributes income according to need. The market, left alone, would fail to do these.
2. The Law of Diminishing Marginal Utility: as we consume more of a product, the additional satisfaction we get from one additional unit diminishes. Utility is measured by the maximum amount one would give up for a unit of the product.
3. The value of a product is determined by the marginal utility of the last unit. The marginal utility of the last gallon of water is low because there is so much of it. The marginal utility of the last carat of diamond is high because there is so little of it.
- 4.
- 5.
10.
6 where marginal revenue equals marginal cost = \$100
11. Minimum efficient scale: the smallest quantity for which the long-run average total cost reaches its minimum
12. Continue to produce in the short-run as long as the total revenue (price) is greater than or equal to the total variable cost (average variable cost)
13. So many sellers that no one can affect the price; perfect information; easy entry and exit; identical products
One seller with high barriers to entry and relatively inelastic demand
One seller but many close substitute products; easy entry and exit; good information
Few sellers with high barriers to entry
14. See the graph in the text

1. What are the **characteristics** of each of the following types of industries? (3 points each)
 1. Perfect Competition
 2. Pure Monopoly
 3. Oligopoly
 4. Monopolistic Competition
2. For several years, the Ford Motor Company operated with an economic loss. Yet, the company continued to produce automobiles. Explain why this company would continue to produce in the **short-run**, even though they have an **economic loss**. (5 points)
3. One of the main arguments of this section of the course is that competition is good for society and monopoly is bad for society. **Explain why this is so**. Illustrate your answer by referring to **at least one** of the cases that were discussed in the class or in the reading. These include the case on pocket calculators, the case on computers, the case on the U.S. Post Office in the text, the case on premium ice cream, as well as any others from the class or reading that you wish to use. (10 points)

4. Name **three barriers to entry** that allow a pure monopoly to exist. (1 point each)

- 1.
- 2.
- 3.

5. <u>Quantity</u>	<u>Total Cost</u>	<u>Price</u>	<u>Total Revenue</u>	<u>Marginal Revenue</u>	<u>Marginal Cost</u>
0	\$ 80	\$175			
1	170	170			
2	270	165			
3	380	160			
4	500	155			
5	630	150			

If the goal of this monopolist is to maximize profits, how many units should be produced? _____

What price should be charged? _____

How much economic profit is earned? _____ **SHOW ALL CALCULATIONS.** (10 points)

7. Choose **ONE ONLY** of the following two questions: (10 points)

6A. San Diego Gas and Electric (SDG&E) was allowed to be the only gas and electric company in San Diego County until a couple of years ago. This was allowed because it was believed that SDG&E was a natural monopoly. **Define natural monopoly and explain why it exists.** Then, explain why SDG&E is no longer a natural monopoly.

OR 6B. Define **price discrimination**. Why is it practiced? What conditions are necessary to practice it? Which section of the market will be charged the higher price? Illustrate your answer with at least one example from among the following: doctors, magazines, movie theaters, or university financial aid.

8. An industry has 10 companies in it. Each company has the following percent of sales.

A	25%	D	10%	G	7%	J	5%
B	15%	E	10%	H	5%		
C	10%	F	8%	I	5%		

What is the **concentration ratio**? _____ (3 points)

Is the industry effectively competitive, a weak oligopoly, or a strong oligopoly? Why? _____ (2 points)

Under the 1984 Merger Guidelines, if Company I and Company J wished to merge, would the merger be allowed by the government? Explain why or why not. Show calculations. (3 points)

9. **Define** each of the following types of merger and **give an example**: (2 points each)

- A. Horizontal Merger
- B. Vertical Merger
- C. Conglomerate Merger

10. Choose **ONE ONLY** of the following questions: (10 points)

9A. What is meant by a **spillover cost (negative externality)**? How does government act to correct for this problem? Illustrate your answer with the case of **pollution**.

OR 9B. What is meant by a **spillover benefit (positive externality)**? How does government act to correct for this problem? Illustrate your answer with the case of **building a new baseball stadium in downtown San Diego**.

11. What is a **public good**? Give at least one example. (5 points)

12. Choose **ONE ONLY** of the following questions: (10 points)

11A. Define “**wage elasticity of demand for labor**”. Then, **name the factors** that will determine if the demand for labor is relatively elastic or relatively inelastic. Finally, use these factors to explain the results of a **comparable worth law** that would raise the pay of all women who work to be equal to the pay of men in comparable jobs. (Hint: the analysis is similar to that of the minimum wage law.)

OR 11B. Today, the average woman who works earns 72% of the earnings of the average man. In 1970, this was only 60%. So women have gained but have not achieved equality. Use the principles developed in the class and the reading to explain why the gap has been closed. Give as many reasons as you can.

13. **Briefly define** each of the following terms: (2 points each)

- A. General Training
- B. Specific Training
- C. Statistical Discrimination

13. Choose **ONE ONLY** of the following: (5 points)

13A. Briefly describe how the **official poverty rate** is measured.

OR 13B. Use at least one example from the reading to explain how one gets to be “super-rich”.

Extra Credit

Up to ten points will be awarded for your answer to the following. However, this question cannot bring the total score on the examination above 100 points.

Briefly describe how one's **benefits** are determined under the **Social Security System** and the **Medicare System**.

Briefly describe how the **Social Security Tax** and the **Medicare Tax** are determined.

What are the **problems** presently that will be faced in the future by the Social Security System?

What **proposals** have been made to solve the problems of the Social Security System?

Based on these proposals, what **suggestions** would you have to fix the Social Security System? Argue for these suggestions.

Examination #3

1. The largest amount of revenue collected by the federal government is collected from the _____ tax. (1 point)

The largest amount of revenue collected by the state governments is collected from the _____ tax. (1 point)

2. When my income was \$100,000, I paid \$20,000 in tax. When my income rose to \$200,000, I paid \$30,000 in tax.

When my income was \$100,000, my **average tax rate** was _____. (2 points)

When my income was \$200,000, my **average tax rate** was _____. (2 points)

My **marginal tax rate** was _____. (3 points)

The tax described above is _____ (progressive, regressive, proportional)

because _____. (2 points)

3. Define each of the following terms: (2 points each)

Progressive Tax

Regressive Tax

4. **Explain why** the state **sales tax** is considered to be regressive: (2 points)

Explain why the **social security tax** is considered to be regressive: (2 points)

5. Assume the following:

	Price in Base Year	Quantity in Base Year	Price in Current Year	Quantity in Current Year
A	\$10	50	\$25	100
B	\$12	20	\$20	25
C	\$20	30	\$50	50

The **Nominal GDP** for the Current Year is \$ _____. (3 points)

The **Real GDP** is \$ _____. (3 points)

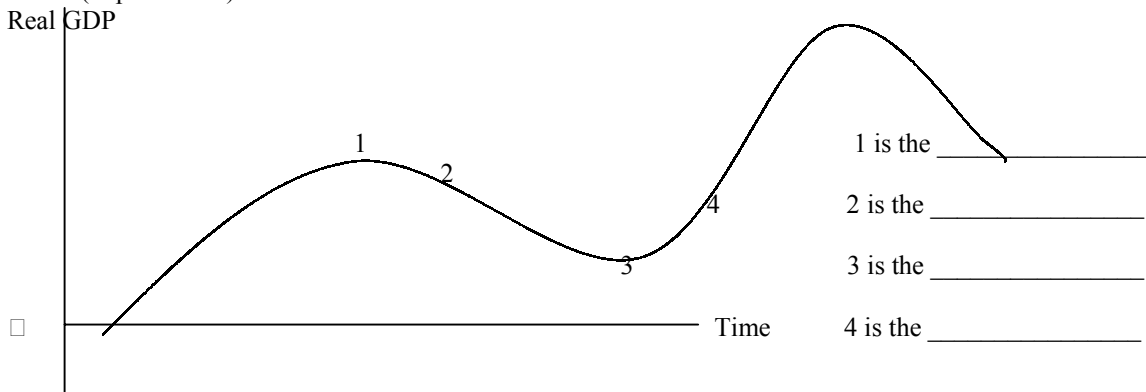
Show All Calculations.

6. Define "business investment spending". (2 points)

Page 2

7. From 1973 to 1995, economic growth in the United States was unusually slow. The American economy grew slowly compared to the past and also compared to other countries. **Name some effects this slow economic growth has had on American life.** (4 points)

4. The **business cycle** shows the change in Real GDP over time. Label each phase on the cycle below. (1 point each) □ □



9. State whether the following people would be considered employed, unemployed, or not in the labor force (2 points each):

a. Bryan lost his job six months ago. After that, he spent his time going to companies to apply for jobs. However, for the last two months, he has given up his search for a new job. _____

b. Last week, Martha spent two days cleaning homes. She charged \$40 for each home cleaned. The rest of the time she spent looking for a better job. _____

10. The Labor Department recently announced that the unemployment rate was 5.7%. Name one reason why this number might be an **understatement** of the actual amount of unemployment that exists? (2 points)

Name one reason that this number be an **overstatement** of the actual amount of unemployment that exists? (1 point)

11. Define the term "full employment". (2 points)

12. State whether each of the following would be considered **Frictional Unemployment**, **Cyclical Unemployment**, or **Structural Unemployment**: (2 points each)

a. A worker at Taco Bell quit her job when college began in the fall. She has been looking for a job in the evenings, which she expects to find very soon.

b. An automobile worker was laid-off when sales of autos fell greatly during the recent recession. He will regain his job when auto sales rise again.

13. If the nominal interest rate on a savings account is 3% at a time that the inflation rate is 1%, what is **the real interest rate**? SHOW ALL CALCULATIONS. (2 points)

14. Assume that the market basket of the **Consumer Price Index** is composed of two products, A and B. In the **Base Year**, people bought 100 of A at a price of \$10 each and 200 of B at a price of \$5 each. In the **current year**, people bought 145 of A at a price of \$50 each and 350 of B at a price of \$15 each. What is the **Consumer Price Index** for the current year? **SHOW ALL CALCULATIONS.** (6 points)

15. Assume your income was \$20,000 last year. This year, the Consumer Price Index rose 10%. You have a COLA. What would your income be this year? **SHOW ALL CALCULATIONS.** (3 points)

16. If you knew that high rates of inflation were coming soon, name two assets that you would want to hold as part of your wealth? **Why?** (4 points)

1.

2.

17. Assume that **Potential Real Gross Domestic Product (GDP)** is \$100,000. National Income is therefore also \$100,000. Of this income, **consumers** spend \$60,000 in the United States, save \$10,000, spend \$10,000 on imported products, and pay \$20,000 in taxes. **Business investment spending** is \$5,000. **Government** has a balanced budget and therefore spends \$20,000. **Exports** are \$10,000. Will this economy experience recession or inflation? Explain why. (4 points)

If the government wished to change its spending to avoid the economic problem, how much should it have spent? _____ (1 point)

If it did spend this amount, the government would have a budget _____ (deficit or surplus?) equal to \$ _____. (1 point)

If your answer is “deficit”, where would the government get the money to spend? If your answer is “surplus”, what would the government do with the surplus? (1 points)

18. I earned \$500,000 from my job. I also received \$50,000 in transfer payments from the government. However, I had to pay \$250,000 in taxes. What was my **disposable income**? Show calculations. (2 points)

19. During a period of severe recession with very high unemployment, name **two fiscal policies** that would be appropriate. (2 points each)

- 1.
- 2.

20. Name the **three functions** of money. (1 point each)

- 1.
- 2.
- 3.

21. What are the **two components of the money supply (M-1)** and what does each represent? (2 points each)

- 1.
- 2.

22. Assume that the Federal Reserve buys \$10 billion of Treasury securities. The reserve requirement is $1/10$ (0.1). As a result of this purchase, the money supply will ultimately _____ (increase or decrease?) by \$_____. **Show Calculations.** (5 points)

23. **Define the following:** (2 points each)

1. Productivity
 2. **Per Capita** GDP
 3. Trade Deficit
 4. Crowding Out
 5. Time Deposit (CD)
-
1. Monetary Base

1. personal income tax; sales tax
2. 20%; 15%; 10%; regressive because the average tax rate fell
3. Progressive: as income rises, the tax paid as a percent of income rises
Regressive: as income rises, the tax paid as a percent of income falls
4. As income rises, people can afford to save. Income is taxed only if it is spent.
The social security tax has an upper limit on income. When that is reached, there is no further tax.
5. $100 \times \$25 + 25 \times \$20 + 50 \times \$50 = \$5,500$
 $100 \times \$10 + 25 \times \$12 + 50 \times \$20 = \$2,300$
6. Businesses buying new capital goods (machines, tools, equipment, etc.)
7. Incomes have risen slower. This has caused more people to work, people to save less, go more into debt, get married later, have fewer children, revolt against taxes, etc. It has also added to the trade deficit.
8. peak, recession; trough; recovery or expansion
9. Not in the labor force; employed
10. Understated because of discouraged workers and workers working part-time involuntarily. Overstated because of the underground economy.
11. Full-employment occurs when no unemployment is cyclical. There is one job for everyone who wants one. It is the lowest unemployment rate before inflation accelerates
12. Frictional; cyclical 13. $3\% - 1\% = 2\%$
14. $(100 \times \$50) + (200 \times \$15)$ divided by $(100 \times \$10) + (200 \times \$5) = 8000/2000 = 4 \times 100 = 400$
15. $\$20,000 + \$2,000 = \$22,000$
16. Real estate; gold; silver, art, antiques, and other collectibles as these would hold their value
17. Recession because total spending $(\$60,000 + \$5,000 + \$20,000 + \$10,000)$ is below the Potential Real GDP. To avoid the recession, the government needs to spend \$25,000. This would leave it with a deficit of \$5,000 that it would get by borrowing from the savers.
14. $\$500,000 + \$50,000 - \$250,000 = \$300,000$
15. Any decrease in government spending or increase in taxes
16. Medium of exchange; Store of Value; Unit of Account
17. Currency is an IOU of a Federal Reserve Bank. + checkable deposits are IOUs of financial institutions
18. Increase by \$10 billion times 10 = \$100 billion. 10 is the money multiplier $1/0.1$.
19. Productivity is Real GDP per Hour
Per capita GDP is the amount of production per person
Trade Deficit is the difference between exports and imports, with imports being the larger
Crowding out: As government deficits increase, the government borrows. Interest rates rise and business investment spending falls. Business investment spending is crowded out by the government deficits.
Time Deposit: an IOU of a financial institution that will not be paid for a fixed period.
Monetary Base: currency + reserves.