

2007 NATIONAL ECONOMICS CHALLENGE
NCEE/Goldman Sachs Foundation

National Round I: Microeconomics
Adam Smith Division

1. If the average variable cost of producing 7 units of a product is \$50 and the average variable cost of producing eight units is \$100, then the marginal cost of producing the eighth unit is:
 - A. \$50
 - B. \$350
 - C. \$400
 - D. \$450
 - E. \$800

2. Market research shows that gate receipts would increase if the price of tickets to a hockey game were increased, even though the number of tickets sold would fall. What does this imply about the price elasticity of demand for hockey tickets?
 - A. Demand is inelastic
 - B. Demand is elastic
 - C. Demand is unit elastic
 - D. Demand is perfectly inelastic
 - E. Demand is perfectly elastic

3. What is the most likely effect on price, quantity exchanged, and consumer surplus of a technological advance that lowers the cost of producing laptop computers?

	<u>Price</u>	<u>Quantity</u>	<u>Consumer Surplus</u>
A.	Decrease	Decrease	Decrease
B.	Decrease	Increase	Decrease
C.	Decrease	Decrease	Increase
D.	Decrease	Increase	Increase
E.	Increase	Increase	Increase

4. When a firm is operating at minimum efficient scale, they are producing
- A. at a point at which average total cost is falling.
 - B. at the smallest scale at which long run average total costs are minimized.
 - C. at the point where economies of scale first set in.
 - D. at a point at which marginal cost is greater than average total cost.
 - E. at a point at which profits first become positive.
5. Which two economic variables are found on the horizontal and vertical scale of a Lorenz Curve?
- A. Average total cost and quantity of output.
 - B. Marginal revenue and price.
 - C. Total production and number of workers employed.
 - D. Number of firms in an industry and industry concentration ratio.
 - E. Cumulative percent of population and cumulative percent of income.
6. Which of the following is not a means-tested transfer payment?
- A. Head Start
 - B. Medicaid
 - C. Supplemental Security Income
 - D. Medicare
 - E. Food Stamp Program
7. A firm is a competitive seller of output at a market price of \$12. The only resource it employs is labor, which is purchased in a competitive market at \$24 per hour. The last worker hired increases total output from 144 units per hour to 160 units per hour. What is the marginal revenue product for this worker?
- A. \$8
 - B. \$12
 - C. \$24
 - D. \$192
 - E. \$384

8. A firm's production function includes labor and capital which cost \$4 and \$6 per hour, respectively. The marginal product of labor is 50 units and the marginal product of capital is 70 units at the current level of output. To minimize production costs at the current level of output, how should the firm alter its use of labor and capital?

	<u>Labor</u>	<u>Capital</u>
A.	Increase	Increase
B.	Increase	Decrease
C.	Decrease	Increase
D.	Decrease	No Change
E.	No Change	No Change

9. Mark learns that an inherited genetic disease affects people in his family. This disease will likely cause early death. Mark immediately applies for a large life-insurance policy without disclosing this genetic fact. This situation between Mark and the insurers:

- A. is economically efficient because Mark gets to buy the insurance he wants.
- B. is economically efficient because Mark's family will need the money when he dies.
- C. is economically inefficient because of asymmetric information.
- D. is economically inefficient because of a fiduciary relationship.
- E. is economically efficient because it overcomes a moral hazard problem.

10. Which of the following statements is not true?

- A. Elasticity is a unit free measure.
- B. The price elasticity of demand for a good depends on the number of close substitutes for the good.
- C. The price elasticity of demand is constant along a straight-line demand curve.
- D. Demand is elastic if its price elasticity of demand is less than -1.
- E. Most goods are normal goods.

11. Two competing airlines, Fly High and Air Best, are considering their optimal pricing strategies. Their strategies are shown in the payoff matrix below, which illustrates their profits under each scenario. The payoff values for each company are shown based on what the other company is expected to do.

Air Best

		High Price	Low Price
Fly High	High Price	Air Best: \$50 Fly High: \$70	Air Best: \$25 Fly High: \$300
	Low Price	Air Best: \$150 Fly High: \$35	Air Best: \$75 Fly High: \$120

- The dominant strategy is to charge high prices for
- A. Fly High, but not Air Best.
 - B. Air Best, but not Fly High.
 - C. both airlines.
 - D. neither airline.
 - E. there is no dominant strategy in this scenario.

12. Which of the following statements about a firm's production function is necessarily true?
- (I) When total product is at its maximum, marginal product is zero.
 - (II) When total product rises, marginal product is rising.
 - (III) When marginal product is greater than average product, average product is falling.
 - (IV) When marginal product is less than average product, marginal product is falling.
- A. (I) only.
 - B. (II) and (III) only.
 - C. (I), (II), and (IV) only.
 - D. (I) and (IV) only.
 - E. (I), (II), (III), and (IV).

13. Which of the following is not true?
- A. The producer surplus for a firm is the area below the price line and above the firm's supply curve.
 - B. Marginal cost increases as more is produced because of diminishing marginal utility.
 - C. The reason a supply curve slopes upward is because marginal costs are increasing.
 - D. The slope of a supply curve depends on how sharply marginal cost increases.
 - E. Economic profits are usually less than accounting profits.
14. Suppose that a tax is placed on cigarettes. If the buyer of cigarettes bears the majority of the burden of the tax, then we know that
- A. the supply curve is more inelastic than the demand curve.
 - B. the supply curve is more elastic than the demand curve.
 - C. the government has levied the tax on the seller.
 - D. the government has levied the tax on the buyer.
 - E. government revenue from the tax will increase substantially.
15. The Securities and Exchange Commission
- A. sets the prices of stocks and bonds.
 - B. requires public companies to reveal their sales strategies.
 - C. requires public companies to disclose truthful financial information.
 - D. regulates the banking system.
 - E. is widely blamed for initiating the Great Depression.