

Introduction to Agricultural Economics
Agricultural Economics 105
Spring 2012

First Hour Exam – Version 1

Name _____ Section _____

For the multiple choice questions, circle the correct answer. For the other questions, either correctly draw on the graphs provided or provide the answer on the space provided. Each question is worth 2 1/2. Show your work.

1. Over the last decade, the price per hundred weight for live cattle (cattle sold from feedlots to meat packers) has been slightly less than the feedlots' breakeven price per hundred weight. Why are feedlots continuing to operate, even though they are selling their cattle for less than their breakeven price?
 - a. The feedlots are able to cover their variable costs and some of their fixed costs, so they do not shut down
 - b. The demand for feedlots is unitary; therefore, changing price does not matter
 - c. It is cheaper for the feedlots to close down than feed some cattle and lose money; therefore, the operators are acting irrational
 - d. In the U.S., we have the lowest costs for food items in the world, and this is just another example of providing low cost food to the U.S. population
 - e. I need to know average marginal cost to correctly answer this question

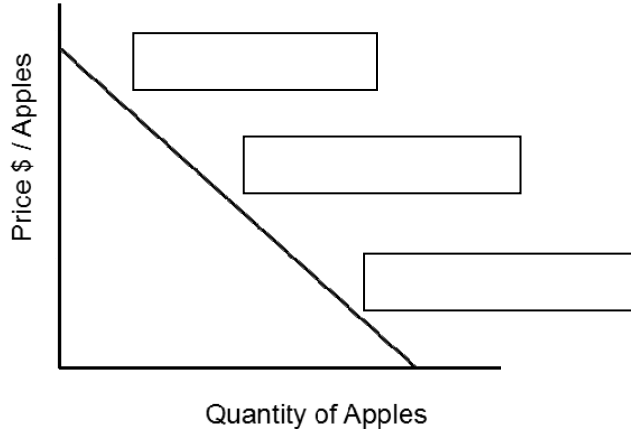
2. The United States government has passed laws restricting the production of illegal drugs. This should cause the price of illegal drugs to increase slightly. The government believes that this increase in price will result in a large decrease in demand for drugs. Is the government under the assumption that the elasticity for illegal drugs is elastic, inelastic, or a unitary?
 - a. Elastic
 - b. Unitary
 - c. Inelastic

3. Aggregate demand is the summation of all relevant individual consumers demand. To be relevant a consumer must have both the (two general conditions discussed in class)

_____ and _____.

4. The marginal utility to price ratio for raincoats is 1.2, whereas, the marginal utility to price for umbrellas is 2.8. As a rational consumer you should
- Shift consumption from raincoats to umbrellas as umbrellas cost more than raincoats
 - Shift consumption from raincoats to umbrellas as umbrellas cost less than raincoat
 - Shift consumption from umbrellas to raincoats as the utility from the last dollar spent is higher for raincoats
 - Shift consumption from raincoats to umbrellas as the utility from the last dollar spent is higher for raincoats
 - Shift consumption from raincoats to umbrellas as the utility from the last dollar spent is higher for umbrellas
5. _____ refers to the implicit cost associated with the next best alternative.
- Marginal cost
 - Opportunity cost
 - Average variable cost
 - Real cost
 - Fixed cost
6. A Giffen good is a good in which people consume more of the good as the price rises (upward sloping demand curve). Such a good violates which one of the following laws
- Law of indifference curves
 - Law of rational consumers – more is preferred to less
 - Law of diminishing marginal returns
 - Law of demand
 - Law of diminishing marginal utility
7. Who is considered the father of modern economic science, he wrote the book “An Inquiry into the Nature and Causes of the Wealth of Nations”?
- Ben Bernanke
 - Adam Smith
 - Jeremy Bentham
 - Alfred Marshall
 - Dr. Norman Borlaug
8. The marketing bill is the portion of the food expenditures associated with activities beyond the farm gate. What is the approximate current marketing bill?
- 84 cents
 - 16 cents
 - 65 cents
 - 35 cents
 - 50 cents

9. On the following demand curve, label the three areas of elasticity: elastic, unitary, inelastic.



10. The trend in percentage of food expenditures at home and away from home over the past 70 years has been

- Increasing expenditures at home and away from home
- Increasing expenditures at home and decreasing away from home
- Increasing expenditures away from home and decreasing at home
- Decreasing expenditures at home and away from home
- Have remained fairly constant in percentage terms

11. As the price of cell phones decreased, more people have purchased cell phones. This is an example of

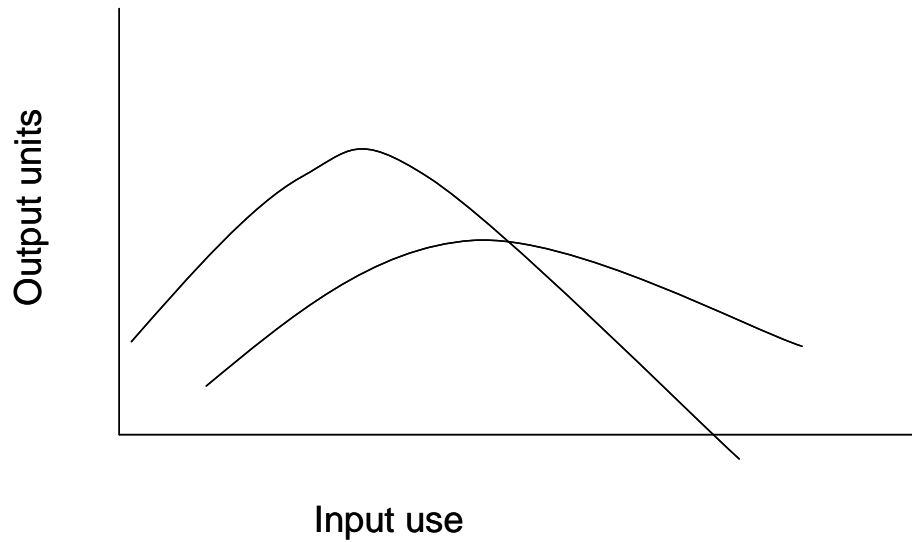
- A shift in demand caused by technological advances
- An increase in quantity demanded
- A change (increase) in demand
- A decrease in quantity demanded
- A change in tastes and preferences that affect both the supply and demand curve

12. The cross price elasticity between the price of microwave ovens and the quantity of delivered pizza in College Station is assumed to be -0.80 . From this estimate we can conclude delivered pizza and microwave ovens are

- Both normal goods
- Both are elastic goods
- Both are inelastic goods
- Substitutes
- Complements

13. Which law suggests that as you consume more candy hearts per day, your marginal utility decreases?
- Law of indifference curves
 - Law of rational consumers – more is preferred to less
 - Law of diminishing marginal returns
 - Law of demand
 - Law of diminishing marginal utility
14. The estimated income of elasticity for Yugo cars is 1.1, which suggests the Yugo car is what type of good?
- Luxury and normal good
 - Necessity and normal good
 - Inferior good
 - Inferior normal good
 - Need to know the own price elasticity to answer this question
15. Assume the cross price elasticity between the tuition and fee costs of AGEC 105 (price of 105) and the quantity of books bought is -0.2. If the price of AGEC 105 increases by 25% as suggested by Dr. Loftin, how will the quantity of books purchased change?
- Increase by 25%
 - Decrease by 25%
 - Decrease by 2%
 - Decrease by 5%
 - Increase by 5%
16. As people's incomes increased over the past 100 years, more and more people have been visiting the national parks. This is an example of
- A shift in demand caused by technological advances
 - An increase in quantity demanded
 - An increase in demand
 - A decrease in quantity demanded
 - A decrease in demand
17. Short run is best characterized by
- One input as illustrated in the class notes
 - Having at least one input fixed
 - By a year, as that is the period for filing taxes
 - MPP and APP curves
 - Both a and b are all correct

18. On the following graph, correctly label the MPP and APP curves and the three stages of production.



19. Use the following input (milk), output (yogurt), and cost data to complete the table. The firm must pay \$800 in costs regardless if they produce yogurt or not. Milk costs \$4.00 / pound. **Show your work to get credit.**

Milk (pounds)	Yogurt (pounds)	FC	VC	TC	AFC	AVC	ATC
100	200						

20. Calculate the marginal costs, total revenue and economic profits for the following data. No, this is not the answer to the previous question. Yogurt sells for \$6/ pound **Show your work to get credit.**

Milk (pounds)	Yogurt (pounds)	TC	MC	TR	Economic Profits
100	200	1600	---	---	---
300	600	3200			

21. At the profit maximizing level of *input*, which of the following are true?

- a. $MVP = 0$
- b. $MVP = MIC$
- c. $MPP = 0$
- d. APP is greater than zero, but MPP is less than zero
- e. $MVP = P$

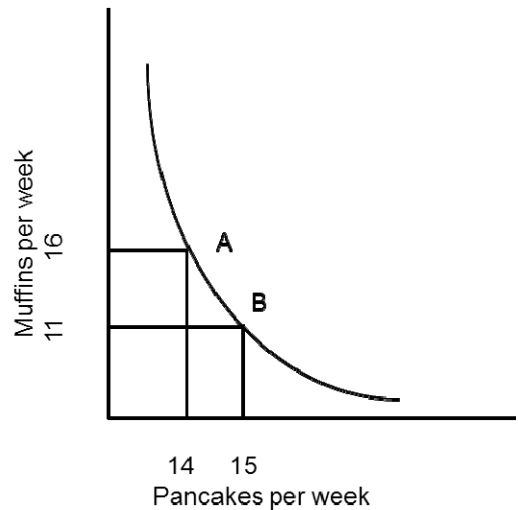
22. In perfect competition, the firm's profit maximizing point is

- a. where $MR = MC$
- b. in stage II of its production function
- c. in stage III of its production function
- d. where Price = MC
- e. a, b, and d are all correct

23. A firm is producing in Stage III of its production function. What advice would you give this firm?

- a. Change nothing
- b. Increase input levels to increase production
- c. Decrease input levels to decrease production
- d. Calculate your MPP and APP curves and produce where these two curves are equal
- e. Need to know MC before you can give the firm any advice

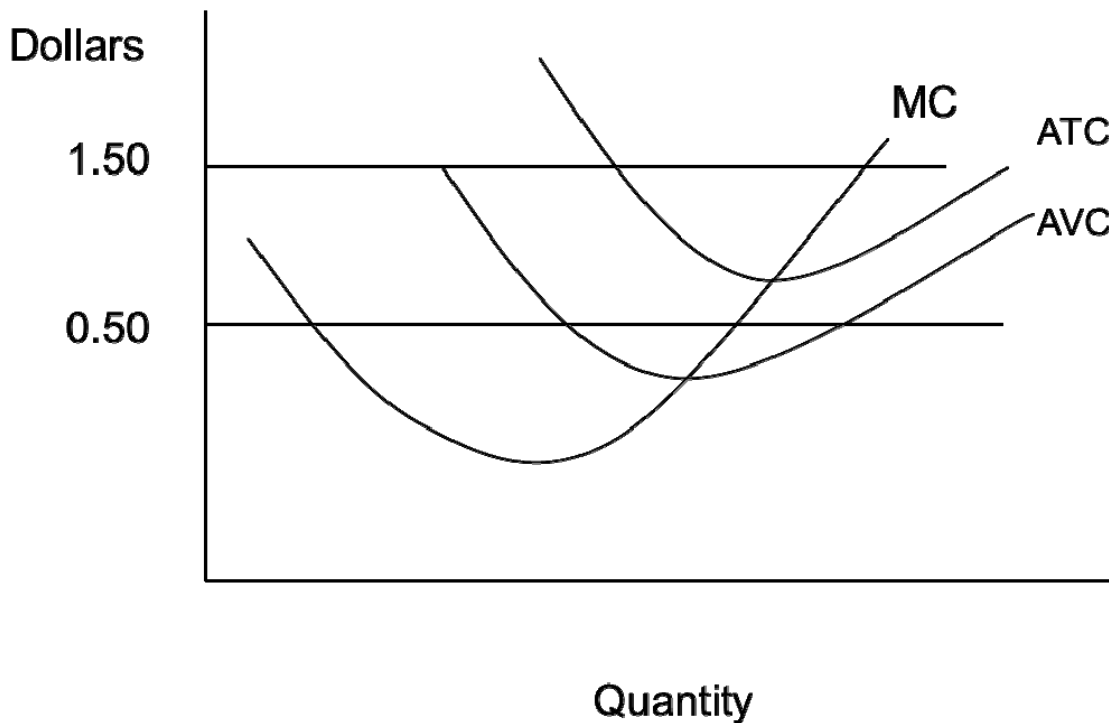
24. Calculate the marginal rate of substitution (MRS) for muffins and pancakes per week between points A and B. For full credit show your work.



25. Interpret the MRS for muffins to pancakes if the value is $-1/3$.

26. In the diagram of muffins and pancakes indicate with an arrow which direction is increasing utility.
27. The perfect competition condition that ensures that resources are free to move in and out of a sector is
- Homogenous product
 - No barriers to entry or exit
 - Large number of buyers and sellers
 - Perfect information for all participants
 - Law of demand

Consider the following cost functions for questions 28 - 30.



28. At a price of \$1.50, how much of total and variable costs is being covered.
- None of both total and variable
 - Cannot tell, because you need to know quantity
 - Some of both total and variable but not all
 - All of variable costs but only some of total costs
 - All of both total and variable costs
29. Draw in the shutdown price.

30. Label the total revenue, total costs, and economic profits when the price is equal to \$0.50.
Be neat and clear.

31. Own price elasticity of supply is found to be unitary; this means that

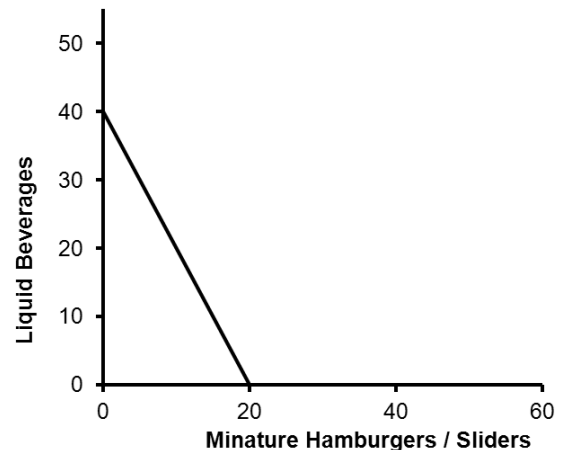
- a. Percentage change in quantity is equal to the percentage change in price
- b. Percentage change in quantity is less than the percentage change in price
- c. Percentage change in quantity is more than the percentage change in price
- d. Cannot tell, because you need to know quantity and price changes
- e. The supply curve is vertical

32. The perfect competition conditions that ensures the price of the good is constant is fixed is

- a. Homogenous product
- b. Entry and exit into the sector can occur without barriers
- c. Large number of buyers and sellers
- d. Perfect information for all participants
- e. Law of demand

33. As a consumer, you have \$160 budget for your Aggie Football tailgate party. You can purchase liquid beverages or miniature hamburgers (sliders). For the following graph of this budget constraint, the prices of beverages and sliders are

- a. \$4 and \$8
- b. \$8 and \$4
- c. \$8 and \$16
- d. \$16 and \$8
- e. Not enough information is provided

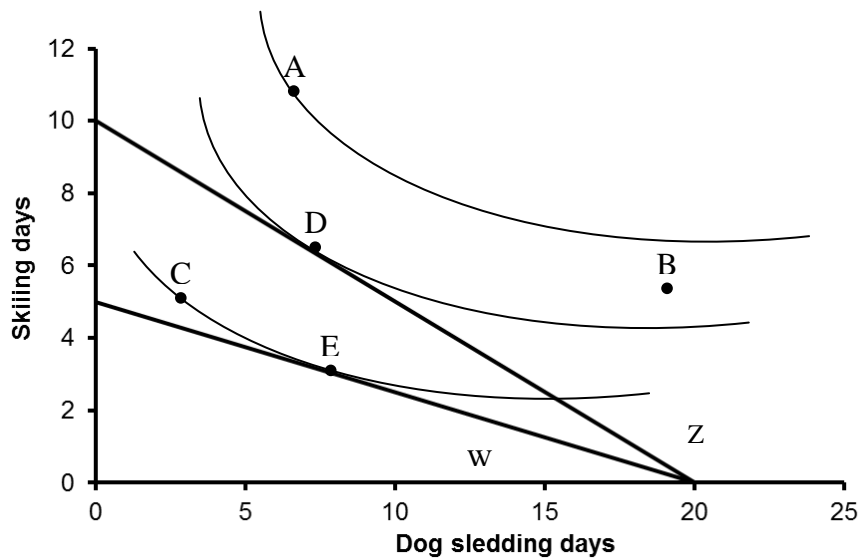


34. On the graph in question 33, draw a new budget constraint that represents a decrease in the budget to \$80.

35. The monthly own price elasticity for dorm housing at Texas A&M is -0.05, whereas, the yearly own price elasticity is -1. Which statement is correct?

- a. The yearly elasticity is unitary meaning the percentage change in price equals the percentage change in dorm rooms occupied
- b. As the price increases for dorm rooms, the number of rooms occupied decreases both in the short and long run
- c. In the longer run, dorm rooms are more elastic than in the shorter run as students have more options in the longer run
- d. If Texas A&M increases its yearly price, total revenue from dorm rooms will not change
- e. All are correct

Use the following graph to answer questions 36-38. For spring break you are going to spend 5 days at Breckenridge Colorado. You have \$500 to spend on either on skiing or dogsledding. The price of skiing is \$50 / day, whereas, dog sledding price is \$25



36. On the following graph what is the correct consumer equilibrium point.

- a. A
- b. B
- c. C
- d. D
- e. E

37. What changed in going from line Z (farthest to the right) to line W?

- a. Price of dog sledding increased
- b. Your budget decreased
- c. Your budget increased
- d. Price of skiing increased
- e. Price of skiing decreased

38. Correctly illustrate the price consumption path for skiing and dog sledding on the graph.

39. The price of designer blue jeans has increased by 25%. As a rational consumer, you have decreased your purchases of designer blue jeans by two. This decrease in purchases is a result of
- Substitution effect
 - Income effect
 - It appears jean manufacturers are taking advantage of consumers by increasing price in a recession
 - Both income and substitution effects
 - Either substitution or income but not both effects – but not enough information is given
40. A downward sloping Engle Curve suggests the good is
- a normal good
 - an inferior good
 - a luxury good
 - a necessity good
 - a good with an elastic demand

Extra Credit

What are the names of your TAs?