Contestant Number: ___KEY________ Score: __________
Chapter: ________________________

Utah Farm Business Management CDE
Individual Event
2012

MULTIPLE CHOICE SECTION. (80 points)
Circle the correct answer and place the letter of the correct answer on the answer sheet provided.

1. In agricultural markets, prices are affected by:
   a. supply and demand
   b. changes in consumer confidence
   c. government policies
   d. all of the above

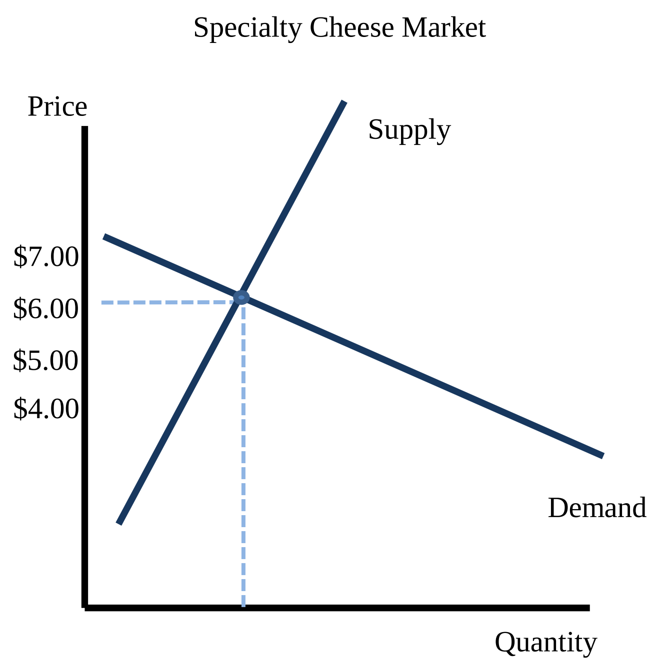
2. If Ben and Joe irrigate their corn field they will increase their corn yield. At some point, continuing to add more water will continue to increase their yield, but at a decreasing rate. If they keep adding water they will eventually reach a point where adding any more water will actually decrease their corn yield. This is an example of what economic concept?
   a. diminishing returns
   b. opportunity costs
   c. amortization
   d. business liquidity

3. On the Statement of Owner Equity, the calculation of net worth includes:
   a. Adding net income
   b. Subtracting owner withdrawals
   c. Subtracting liabilities from assets
   d. Both a and b

4. According to the law of supply and law of demand, which of the following statements is true?
   a. As price increases, quantity demanded decreases and quantity supplied decreases
   b. As price decreases, quantity demanded decreases and quantity supplied increases
   c. As price increases, quantity demanded decreases and quantity supplied increases
   d. As price decreases, quantity demanded increases and quantity supplied increases

5. Ray Little's records show that his large tractor uses six gallons of fuel/hour and can harrow 20 acres/hour pulling a set of 35 foot wide finishing harrows. His smaller tractor requires five gallons of fuel/hour but can only harrow 18 acres/hour. If he wants to minimize costs, which tractor would you suggest he use if fuel costs $3.25 per gallon and labor costs $10 per hour?
   a. He should use the bigger tractor because he gets more acres done in an hour
   b. He should use the smaller tractor because the total cost per acre is less
   c. He should use the smaller tractor because it uses less fuel per hour
   d. It does not matter which tractor is used

Use the following graph to answer questions 6-8.



6. What is the equilibrium price for specialty cheese?
   a. $4.00
   b. $5.00
   c. $6.00
   d. $7.00

7. The supply of specialty cheese is:
   a. Relatively elastic
   b. Relatively inelastic
   c. Upward sloping
   d. Both b and c

8. Which of the following will occur at a market price of $7.00?
   a. A surplus
   b. Equilibrium conditions
   c. A shortage
   d. More demand than supply

9. If summer sausage and specialty cheese are complementary goods, a decrease in the price of summer sausage will cause:
   a. The demand for specialty cheese to increase and the equilibrium price to decrease
   b. The demand for specialty cheese to decrease and the equilibrium price to decrease
   c. The demand for specialty cheese to decrease and the equilibrium price to increase
   d. The demand for specialty cheese to increase and the equilibrium price to increase

10. Principle payments on debt would be included on which financial statements?
    a. Balance Sheet
    b. Accrual Income Statement
    c. Statement of Cash Flows
    d. None of the above

11. Buddy Deimler bought 100 head of steers that weighed 550 pounds at a price of $110 per cwt last fall. He projects his cost per pound of gain to be $0.85 cents. If he sells them for $100 per cwt, when they weigh 850 pounds, what is his total profit or loss?
    a. Loss of $1,050
    b. Gain of $1,050
    c. Loss of $1,000
    d. Gain of $1,000

12. Which of the following are examples of variable costs?
    a. feed
    b. labor
    c. fuel
    d. all of the above

13. If Ben and Joe wanted to maximize profits they should:
    a. produce where marginal revenue is equal to marginal cost
    b. produce where total revenue is greater than total cost
    c. produce where costs are minimized
    d. produce at the maximum production point

14. Who is the current U.S. Secretary of Agriculture?
    a. Kathleen Merrigan
    b. Daniel Glickman
    c. Tom Vilsack
    d. Jon Huntsman

15. Joe feels that the demand for sweet corn at the farmer's market is fairly elastic. This means that an increase in the price of sweet corn will:
    a. only decrease the quantity of corn demanded a little
    b. increase the quantity of corn demanded a little
    c. decrease the quantity of corn demanded a lot
    d. not change the quantity of corn demanded

16. Which of the following could reduce production risk?
    a. genetically modified crops
    b. crop insurance
    c. crop diversification
    d. all of the above

17. Which of the following is used to evaluate financial efficiency?
    a. current ratio
    b. labor productivity ratio
    c. debt/asset ratio
    d. return on equity

18. Which of the following would be included on an accrual income statement but not on a cash income statement?
    a. fertilizer expenses
    b. cash paid interest on operating loans
    c. receipts for livestock sales
    d. depreciation on machinery

19. If Alice Dooseday wanted to know whether she should replace her corn enterprise with a wheat enterprise, she should complete a:
    a. whole farm budget
    b. enterprise budget
    c. partial budget
    d. family living budget

20. Renting land on shares of production rather than for cash results in:
    a. less risk for both the landlord and the tenant
    b. more risk for both the landlord and the tenant
    c. less risk for the landlord and more risk for the tenant
    d. more risk for the landlord and less risk for the tenant

MATCHING. (40 Points)
Match the terms on the right with the correct definitions and statements on the left. Write your answers in the blanks provided and on the answer sheet provided.
Note: Some answers will be used more than once.

21. _____ A market structure characterized by one seller that sells a specific product with no good substitute.

22. _____ Goods that are consumed instead of other goods. An increase in the price of one will cause a decrease in the demand for the other.

23. _____ A market structure characterized by many sellers that sell differentiated products.

24. _____ A producer's ability to produce a good at a lower opportunity cost than other producers.

25. _____ A market structure with low barriers to entry and where the sellers set their own price, but face downward sloping demand curves.

26. _____ A market structure where the sellers are price-takers.

27. _____ Goods that are generally consumed together. An increase in the price of one will cause an increase in the demand for the other.

28. _____ A market structure characterized by many sellers that sell homogeneous products.

29. _____ The cost of using a resource based upon what it could have earned in the next best alternative.

30. _____ A market structure characterized by a small number of sellers that sell homogeneous or differentiated products.

a. Perfect Competition Markets

b. Monopolistic Competition Markets

c. Oligopoly Markets

d. Monopoly Markets

e. Substitute goods

f. Complementary goods

g. Comparative advantage

h. Opportunity cost

PROBLEM SECTION. (180 points)
Use the *Resource Information for Ben and Joe's Produce* provided and the additional information given in this section to answer the questions. Please read all questions carefully and answer them completely.

1. Given the enterprise budgets provided with the *Resource Information*, what are the net returns above operating costs and above total costs per acre for Ben and Joe's Produce for their sweet corn and pumpkin enterprises? (16 points)

	Net Returns Above Operating Costs	**Net Returns Above Total Costs**
a. Sweet Corn:	$____1,352.18____ per acre	$_____1,332.18___ per acre
b. Pumpkins:	$____933.15_____ per acre	$_____913.15_____ per acre

2. Prices are always changing in agricultural markets. If national corn prices increase, Joe thinks he can secure a contract with the grocery store this year for $2.75/dozen ears and they can sell the rest of the corn for $3.75/dozen ears. However, he thinks he will only be able to secure a contract for pumpkins at $200.00/ton. Similarly, he believes other pumpkins sale prices would drop to $1.50, $3.50, and $6.00 for small, medium, and large pumpkins, respectively. If these prices change as Joe expects and *everything else remains the same*, what would the new net returns be for the two enterprises of Ben and Joe's Produce? (24 points)

	Net Returns Above Operating Costs	**Net Returns Above Total Costs**
a. Sweet Corn	$____1,664.68____ per acre	$____1,644.68____ per acre
b. Pumpkins:	$____717.15_____ per acre	$____697.15______ per acre

3. Using the enterprise budgets and your calculations in question 2, answer the following questions about Ben and Joe's Produce:

a. Which Ben and Joe's Produce enterprise was the most profitable per acre in 2011? (5 points)
_____Sweet Corn__________________________

b. Given the price changes in question 2, what would be the returns above total expenses for the 8-acre sweet corn enterprise? (5 points) ______$13,157.44__________________________

c. Given the price changes in question 2, what would be the returns above total expenses for the 2-acre pumpkin enterprise? (5 points) _______$1,394.30_____________________________

d. Given the price changes in question 2, would the returns above total expenses for both enterprises for 2012 be greater or less than that for 2011? (5 points)
______Greater______________________________

4. Ben would like to diversify by adding a strawberry high tunnel, but Joe would rather specialize and focus on the corn. What are some benefits to each of these options? (15 points)

Answers vary.

By specializing in corn, Ben and Joe would become more efficient in growing corn and would likely have greater profits.

Diversifying would reduce their risks. If the price of corn fell or their production decreased, they could still earn profits from their other enterprises.

5. Ben and Joe had a fairly large amount of produce they were unable to sell last year. This year they plan to sell their extra produce at the local farmer's market to capture more returns. It will cost them $100 to purchase initial equipment to set up a booth and that equipment would depreciate according to the depreciation schedule provided in the resource information. They plan to sell produce at the farmers market seven times and estimate the following additional revenue and costs:

Date	Additional Produce Sales	Price	Market Booth Fee	Additional Costs (Labor, booth supplies, fuel, etc.)
June 30	15 doz. ears corn	$6.00/doz.	$7	$50
July 14	20 doz. ears corn	$6.00/doz.	$7	$50
July 28	25 doz. ears corn	$6.00/doz.	$7	$50
Aug. 11	25 doz. ears corn	$6.00/doz.	$7	$50
Aug. 25	15 doz. ears corn	$6.00/doz.	$7	$50
Oct. 13	25 pumpkins	$6.50/ea.	$7	$50
Oct. 20	30 pumpkins	$6.50/ea.	$7	$50

Note: These additional revenues and costs have already been factored into the projected financial statements for 2012. Relative to the depreciation expense, remember that the truck depreciation has also increased to the annual amount compared to only the first year portion in 2011.

Based on this information and assuming all other revenues and costs remained the same, how will selling at the farmer's market affect Ben and Joe's accrual income statement (be specific) and what will be the effect on their net income? (15 points)

Revenue will increase by the additional sales: $957.50
Expenses will increase by the additional costs: $399.00
Depreciation expense will increase by the first year depreciation expense allocation: $17.50
Total expenses will increase: $416.50

Net Income (accrual basis) will increase by $541.00

6. Ben was able to find a one-row corn harvester they could purchase for $15,000. Two financing options are available:

1. They could get a loan to purchase the corn harvester. The loan would require $1,000 paid up front and then monthly payments of $255 for 5 years.
2. They could lease the corn harvester for $300 a month and have the option to buy the harvester for $6,000 after 3 years.

If Ben and Joe purchase or lease the harvester, they will acquire it June 1st. If they decide not to get the harvester, they will hire individuals to hand pick the corn like last year. Based on these options, answer the following questions.

a. According to the Projected Cash Flow for Ben and Joe's Produce for 2012 provided in the resource information, will they have enough cash to make the monthly payments for the loan? For the lease? (10 points)

They will have enough cash for either financing option.

b. How would acquiring the loan and purchasing the harvester affect the balance sheet and income statement at the end of 2012? (15 points)

Current assets would decrease by the down-payment and 2012 year payment amounts.
Non-current assets would increase by harvester value.
Current liabilities would increase by the 2013 year portion of loan principle and any accrued interest.
Non-current liabilities would increase by the remaining loan balance.

c. Would you recommend they purchase the corn harvester and, if so, which financing option should they choose? Explain and support your answer with specific reasons. (15 points)

Answers vary and are evaluated based on how well the answer is explained and supported.

7. List one ***specific*** way Ben and Joe have managed each of the following types of risk and one ***additional*** thing Ben and Joe could do to manage each type of risk. (50 points)

Answers vary.

	Have Done	Could Do
a. Production Risk:	• Some diversification by growing more than one type of crop • Increasing knowledge with Ben's Agronomy major.	• Insurance • Share lease instead of cash lease
b. Price/Marketing Risk:	• Forward contracts with the grocery stores • Increasing knowledge with Ben's Ag Business minor and Joe's Ag Econ major	• Insurance • Purchase excess inputs at lower prices and store for use when input prices are higher
c. Financial Risk:	• Good financial records • Renting land and equipment	• Improve financial position
d. Human Risk:	• Defined partner roles • Trained corn pickers	• Improve business plan and better align business goals
e. Legal/Institutional Risk:	• Written partnership agreement and contracts.	• Explore other business organizations, like an LLC, to decrease personal liability • Increase knowledge of institutional policies and laws

ANSWER SHEET:

1. __D___
2. __A___
3. __D___
4. __C___
5. __B___
6. __C___
7. __D___
8. __A___
9. __D___
10. __C___
11. __C___
12. __D___
13. __A___
14. __C___
15. __C___
16. __D___
17. __B___
18. __D___
19. __C___
20. __D___
21. __D___
22. __E___
23. __B___
24. __G___
25. __B___
26. __A___
27. __F___
28. __A___
29. __H___
30. __C___

Chapter: ____KEY________ Score: ____________

Utah Farm Business Management CDE
Team Section
2012

Use the templates and space provided on the subsequent pages to answer the following questions. Please read each question carefully and answer them completely.

1. Ben and Joe are considering constructing a high tunnel and growing June-bearing strawberries. Ben's father won't require additional land rental for the land on which the high tunnel will be built in exchange for a few strawberries now and then. Joe estimates they can build one 14' × 96' high tunnel for a total cost of $1,680. They then expect costs and returns to be the same as those listed on the enterprise budget for strawberries. No loans would be obtained for this enterprise; all expenses would be paid out of the positive Ag State Checking account balance. Assuming Ben and Joe decide to go ahead with this plan and all other production costs, revenues, and withdrawals for their other enterprises remain as projected, answer the following:

a. Adjust the projected income statement for 2012 to include the new strawberry enterprise. The high tunnel and strawberry planting will occur in the fall of 2012 for harvest in early spring of 2013. Thus, make your adjustments according to the following:
   - No ***Receipts*** would be included in the 2012 projections since harvest would not take place until 2013
   - No ***Strawberry Harvest and Post-Harvest*** expenses would be included since they also would take place in 2013
   - Only include 50% of the total ***Strawberry Establishment and Growth Labor*** expenses in the 2012 projection since some of the labor will be expended in 2012 and some in 2013
   - Only include 25% of the annual ***High Tunnel Depreciation*** expense since the high tunnel will not be built until fall and begin to be depreciated until October. Thus, only three months of depreciation expense would be allocated to 2012.
   - All other expenses would be included as outlined on the Strawberry budget

b. Adjust the projected balance sheet for Dec. 31, 2012 to include the new strawberry enterprise. (The same constraints used in part **a** are also relevant for the balance sheet).

c. What other considerations should Ben and Joe make before deciding whether or not to build a high tunnel and grow strawberries? What would you recommend they do? ***Why?***

2. Based on the reference material, financial information, and budgets for Ben and Joe's Produce, analyze the strengths and weaknesses of Ben and Joe's small produce farm. List at least four strengths and four weaknesses and comment on how each of the weaknesses could be overcome.

a. Projected Income Statement

	2011	Projected 2012
REVENUE		
Cash Sales		
Corn Grocery Store Sales	$24,000.00	$24,000.00
Other Corn Sales	$1,071.25	$1,671.25
Pumpkin Grocery Store Sales	$3,392.00	$3,392.00
Other Pumpkin Sales	$1,307.00	$1,664.50
Strawberry Sales		$0.00
Total Income (cash basis)	**$29,770.25**	**$30,727.75**
Accrual Adjustments		
	$0.00	
Total Income (accrual basis)	**$29,770.25**	**$30,727.75**
EXPENSES		
Cash Expenses		
Seed	$1,472.00	$1,472.00
Fertilizer	$594.50	$594.50
Pesticides/Herbicides	$3,986.40	$3,986.40
Beehive Rental	$50.00	$50.00
Custom Hire	$111.36	$111.36
Harvesting Labor	$1,900.00	$1,900.00
Harvesting Supplies	$5,100.00	$5,100.00
Marketing Labor		$280.00
Marketing Supplies		$35.00
Fees		$49.00
Land Rent	$800.00	$800.00
Irrigation	$60.00	$60.00
Machinery Costs	$535.20	$535.20
Truck Expenses	$374.00	$409.00
Interest Expense	$800.00	$800.00
Strawberry Preplant and Prep Supplies		$90.90
Strawberry Preplant and Prep Labor		$342.50
Straw. Estalishment and Growth Supplies		$215.80
Straw. Estalishment and Growth Labor		$292.50
Strawberry Harvest and Post-Harvest		$0.00
Total Expenses (cash basis)	**$15,783.46**	**$17,124.16**
Accrual Adjustments		
Depreciaton	$116.67	$217.50
High Tunnel Depreciation		$44.69
Total Expenses (accrual basis)	**$15,900.13**	**$17,386.35**
Net Farm Income (cash basis)	**$13,986.79**	**$13,603.59**
Net Farm Income (accrual basis)	**$13,870.12**	**$13,341.40**

b. Projected Balance Sheet

ASSETS	December 31, 2011	December 31, 2012 *(Projected)*
Current Assets		
AG Bank Checking	$6,786.79	$8,610.38
Total Current Assets	**$6,786.79**	**$8,610.38**
Non-Current Assets		
Truck	$1,200.00	$1,200.00
Equipment		$100.00
Accumulated Depreciaton	-$116.67	-$378.86
Strawberry High Tunnel		$1,680.00
Total Non-Current Assets	**$1,083.33**	**$2,601.14**
Total Farm Assets	**$7,870.12**	**$11,211.52**
LIABILITIES		
Current Liabilities		
	$0.00	**$0.00**
Total Current Liabilities	**$0.00**	**$0.00**
Non-Current Liabilities		
	$0.00	**$0.00**
Total Non-Current Liabilities	**$0.00**	**$0.00**
Total Farm Liabilities	**$0.00**	**$0.00**
Net Worth (Equity)	**$7,870.12**	**$11,211.52**

c. What other considerations should Ben and Joe make before deciding whether or not to build a high tunnel and grow strawberries? What would you recommend they do? ***Why?***

Answers vary.

2. Based on the reference material, financial information, and budgets for Ben and Joe's Produce, analyze the strengths and weaknesses of Ben and Joe's small produce farm. List at least four strengths and four weaknesses and comment on how each of the weaknesses could be overcome.

Answers vary.