

PART I. Multiple Choice. Indicate the best answer. (3.33 points each)

1. We discussed the aspect of establishing S.M.A.R.T. goals. Examples of S.M.A.R.T. goals would include:
 - a. selective, time constrained, much improved.
 - b. measurable, assisting, routine.
 - c. routine, measurable, time constrained.
 - d. routine, measurable, specific.
 - e. All of the above fit S.M.A.R.T. goals we discussed.
 - f. None of the above fit S.M.A.R.T. goals we discussed.

2. An important component of business management is development of a mission statement. A mission statement:
 - a. outlines all of your detailed crop production plans such as level of fertilizer to use, etc.
 - b. is a short statement of why the business exists.
 - c. can only be established after you have established your goals.
 - d. can only be established after you have selected enterprises for the farm.
 - e. all the above.
 - f. a and b above relate to a mission statement.

3. In lab 1 you looked at strategic management and tactical management. Strategic management is:
 - a. Determining the acres of corn to produce next year.
 - b. Charting the overall long term course of the business.
 - c. Determining the number of replacement dairy heifers needed.
 - d. Determining if you will cash rent the neighboring 80 acres next year.
 - e. None of the above is strategic management functions.

4. An example of a competitive goal (relationship) would be:
 - a. You have 300 acres of cropland and if you raise more corn you need to raise less soybeans.
 - b. You have \$200,000 of capital (money) available and if you buy some equipment you cannot expand the cattle feeding operation.
 - c. You have 3,500 hours of labor available and if you use more in livestock production you need to cut back on crop production.
 - d. All the above are examples of a competitive relationship.
 - e. None of the above are examples of a competitive relationship.

5. Steps to decision making would include:
 - a. Define the problem.
 - b. Analysis of alternatives.
 - c. Accept the responsibility.
 - d. Evaluate the outcome over time.
 - e. All the above are steps to decision making.

6. At the beginning of the semester we talked about the three C's. These were:
 - a. communication, customer's satisfaction, critical analysis.
 - b. coordination, cooperation, communication.
 - c. communication, coordination, cash flow.
 - d. communication, consumption, cooperation.
 - e. none of the above.

7. A supplementary enterprise is:
- Where if you increase the production of one enterprise, you can also increase the production of another enterprise.
 - Where if you increase the production of one enterprise, you will need to reduce the production of another enterprise.
 - Where if you increase the production of one enterprise, you will not impact the production of another enterprise.
 - None of the above represents a competitive enterprise.

The following information is for the following five questions (8-12).

"Herkey Hawkeye" is thinking about growing some corn this year (2008). As usual, "Herkey" has no idea what is going on. "Herkey" does get one thing right - that is to ask a "Cyclone" what to do. You help "Herkey Hawkeye" pull together the following information. The corn production information on "Cy's" farm, which "Herkey" will cash rent until the Hawkeyes beat the Cyclones in football (which will be forever!!!). The cash rent contract also indicates that the cash rent will increase by \$60.00 per acre per year for the next 15 years. You are surprised "Herkey" would sign such a contract but again "Herkey" has no idea what is going on. The nitrogen cost is 40 cents per pound and the corn price is \$5.00 per bushel.

Pounds of Nitrogen/Per Acre	Bushels of Corn/Per Acre
0	100
30	120
60	130
90	135
120	138
150	140
180	141
210	135

8. If the cost of nitrogen is 40 cents per pound and the corn price is \$5.00 per bushel, how much nitrogen should "Herkey" apply to maximize profits?
- 60 pounds.
 - 90 pounds
 - 120 pounds
 - 150 pounds
 - 180 pounds
9. What is the value of the increased corn yield for the 30 pounds of nitrogen as "Herkey" moves from 60 to 90 pounds of nitrogen? (The corn price is \$5.00 per bushel).
- \$5.00
 - \$25.00
 - \$15.00
 - \$50.00
 - None of the above.
10. How high would the price of corn need to be before "Herkey" would apply 180 pounds of nitrogen? (The nitrogen cost is 40 cents per pound.)
- "Herkey" should never apply 180 pounds of nitrogen as he will not get a return.
 - At a corn price of \$12.01 or more "Herkey" should apply 180 pounds.
 - At a corn price of \$8.01 or more "Herkey" should apply 180 pounds.
 - At a corn price of \$6.01 or more "Herkey" would apply 180 pounds.

11. What is the marginal cost of producing another bushel of corn as you move from 0 to 30 pounds of nitrogen is:
- \$12.00
 - \$.60
 - \$5.00
 - \$1.20
 - None of the above.
12. For this example the profit maximizing level of fertilizer application per acre is determined by where:
- The marginal cost equals the marginal value product
 - The marginal value product equals the marginal cost
 - The isoquant equals the iso-cost
 - The marginal revenue equals the marginal cost
 - None of the above.
13. A production possibilities curve shows:
- Various combinations of outputs which can be produced from the same set of inputs
 - The slope of the marginal value product curve
 - All the levels of output of one product which can be produced from varying levels of one input
 - Various combinations of inputs that produce the same level of output
14. You are provided the following information:

<u>Pounds of Nitrogen</u>	<u>Marginal Value Product</u>	<u>Bushels of Corn</u>
60		120
----->	\$32	
90		
----->	\$28	
120		
----->	\$20	
150		
----->	\$12	
180		

Given this and that the price of corn is \$4.00 per bushel, what is the number of bushels of corn when 90 pounds of nitrogen is applied?

- 152 bushels
- 180 bushels
- 128 bushels
- 135 bushels
- None of the above.

The following table applies to the following two questions (#15 & 16). The information represents different hay and grain rations that will produce 150 pounds of beef at Betty's Beef Brigade. The grain price is \$.12 per pound and the hay price is \$.05 per pound.

Ration	Pounds of Hay	Pounds of Grain
1	1,050	250
2	750	350
3	520	450
4	300	550
5	150	650

15. Given that each ration will produce 150 pounds of beef for Betty, what ration should Betty use if the cost of hay is \$.05 per pound and the cost of grain is \$.12 per pound?
- ration 1
 - ration 2
 - ration 3
 - ration 4
 - ration 5
16. If the grain price increased by \$.05 per pound and the hay price increased by \$.05 per pound Betty would:
- increase her amount of hay fed.
 - increase her amount of grain fed.
 - not change the ration.
 - increase the amount of beef produced.
 - reduce the size of the feedlot.
17. In developing an enterprise budget, what are the areas to consider?
- income or revenue
 - expenses
 - profit
 - all of the above
 - only a and c above as expenses are fixed
18. We talked about some components of farm business management. These could include:
- economic principles.
 - records and/or budgets.
 - your goals and your family goals.
 - All of the above.
 - b and c above.
19. An isorevenue curve is useful for considering:
- profit maximizing combinations of multiple outputs.
 - the profit maximizing choice of a single input.
 - cost of minimizing the cost combinations of inputs.
 - None of the above.

The next two questions are based on the following information (#20 & 21).

You have 100 acres of land and you can produce corn and wheat. If you produce all corn, you produce 12,000 bushels and if you produce all wheat, you produce 6,000 bushels. Other combinations are shown in the table below.

Combination Number	Corn Bushels	Wheat bushels
1	0	6,000
2	4,000	5,000
3	8,000	3,000
4	12,000	0

20. If the price of corn is \$4.60 per bushel and the price of wheat is \$6.00, what combination would you select to maximize your profits?
- Number 1
 - Number 2
 - Number 3
 - Number 4
 - Number 2 and 3 provide same profit
21. If the price of corn is \$4.00, how high would the price of wheat need to be before you would produce all wheat? (Combination 1)
- At least \$2.67 per bushel
 - At least \$7.50 per bushel
 - At least \$16.00 per bushel
 - At least \$14.50 per bushel
 - Can't determine with information provided.

The following information is used for the next two questions and provides returns in \$2,000 increments for three alternative uses of capital (# 22 & 23).

Capital Invested	<u>What Capital invested In</u>		
	Cattle	Hogs	Sheep
1 First \$2000	\$2,800	\$3,000	\$3,000
2 Second \$2000	\$2,000	\$3,500	\$4,000
3 Third \$2000	\$1,500	\$2,500	\$2,500
4 Fourth \$2000	\$700	\$1,500	\$2,200
5 Fifth \$2000	\$500	\$1,200	\$1,500

22. If you have only \$4,000 to invest where will you put your money?
- \$2,000 in hogs and \$2,000 in sheep.
 - \$4,000 in sheep.
 - \$4,000 in cattle.
 - \$4,000 in hogs.
 - None of the above is the best combination.

23. How much would you invest if you have unlimited capital or you can invest as much as you want?
- a. \$10,000 in all three areas as total returns exceed total costs.
 - b. Only \$6,000 in hogs and \$8,000 in sheep.
 - c. \$4,000 in cattle; \$6,000 in hogs; and \$8,000 in sheep.
 - d. \$5,000 in sheep and none in the other areas as that provides the highest total return.
 - e. None of the above.

The following seven questions (#24-30) are based on the attached herbicide tolerant soybeans following corn budget.

24. Attached is an example budget for soybean production. What is the phosphate cost per pound (lb) used in the budget?
- a. \$17.50
 - b. \$31.00
 - c. \$2.00
 - d. \$.50
 - e. None of the above.
25. Given the attached soybean budget, if you had larger machinery and you used 2 hours rather than 2.45 hours of labor per acre, what would your labor cost on the budget be?
- a. \$26.95
 - b. \$20.00
 - c. Would not change because it is not a fixed cost.
 - d. \$22.00
 - e. None of the above.
26. Given the attached soybean budget, if the price of soybeans is \$10.00 per bushel, what is the level of income over variable costs (gross margin) for an acre of soybeans? (Assume all costs are as provided in the budget.)
- a. \$100.89
 - b. \$309.03
 - c. \$140.97
 - d. \$208.14
 - e. None of the above.
27. Given the attached soybean budget, what is the fixed cost of producing an acre of soybeans? (Assume all costs are as provided in the budget.)
- a. \$349.11
 - b. \$140.97
 - c. \$155.00
 - d. \$208.14
 - e. None of the above.
28. For the attached budget, how low can the price of soybeans go in the short run before you would decide not to grow soybeans and to let the land sit idle? (Assume you have no other use for the land. Your either produce soybeans or let it idle.)
- a. \$3.13 or less per bushel
 - b. \$4.63 or less per bushel
 - c. \$8.76 or less per bushel
 - d. \$7.76 or less per bushel

29. What is the break-even price for soybeans to cover all costs?

- a. \$4.63 or less per bushel
- b. \$7.17 or less per bushel
- c. \$3.13 or less per bushel
- d. \$8.45 or less per bushel
- e. None of the above.

30. How much potash is used per acre of soybeans?

- a. 70 pounds
- b. \$17.50
- c. 35 pounds
- d. 1.2 units
- e. None of the above

Part II. Bonus (2 points)

How do you spell the last name of the instructor of the first half semester of this class?

KliebeuStein

Herbicide Tolerant Soybeans following Corn

	45 bu. per acre	
	Fixed	Variable
Preharvest Machinery "	\$14.20	\$13.30
Seed, Chemical, etc.	Units	
Seed @ \$31.00 per 50 lb.	1.2	\$37.20
Phosphate <i>Lb</i>	35	\$17.50
Potash @ \$0.27 per lb.		\$18.90
Lime (yearly cost)		7.00
Herbicide "		15.75
Crop Insurance		8.00
Miscellaneous		8.00
Interest on preharvest variable costs (8 months @ 8%)		<u>6.70</u>
Total		\$119.05
Harvest Machinery		
Combine	\$10.50	\$7.30
Haul	1.04	1.12
Handle	0.45	0.20
Total	<u>\$11.99</u>	<u>\$8.62</u>
Labor		
2.45 hours @ \$11.00	\$26.95	
Land		
Cash rent equivalent	\$155.00	
Total fixed, variable		
Per acre		\$140.97
Per bushel	\$4.63	
Total cost per acre		\$349.11
Total cost per bushel		