Part I. Multiple Choice. Indicate the best answer. (3.5 pts. ea.)

1. Which of the following are decision-making steps of management?
   a. Implementation, set goals, analyze alternatives
   b. Setting goals, make decision, organize data
   c. Defining alternatives, accept responsibility, evaluate outcome
   d. Accept responsibility, make decision, organize data
   e. All are decision-making steps of management
   e

2. 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. All of the above fit S.M.A.R.T. goals we discussed.
   e. None of the above fit S.M.A.R.T. goals we discussed.
   e

3. 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, customer satisfaction
   c. Communication, coordination, cash flow
   d. Communication, consumption, cooperation
   e. None of the above.
   e

4. When a relationship between two products such as pork production and corn production exists where you can adjust your enterprise mix and increase the amount of one enterprise (pork) you produce, while also increasing the level of the second enterprise (corn) produced, these products are ______ products.
   a. Supplementary
   b. Complementary
   c. Competitive
   b

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

6. Agriculture is a dynamic industry. Issues which managers need to evaluate include:
   a. Access to information, global competition, business structure
   b. Access to capital, bioterrorism, labor
   c. Environmental concerns, consumer demand, worker and animal health
   d. Government program, technology, mergers
   e. All of the above.
   e
7. We talked about some components of farm business management. These could include:
   a. Economic theory
   b. Records and/or budgets
   c. Your goals and your family goals
   d. All of the above
   e. B and c above

8. 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 of the above
   f. A and b above relate to a mission statement.

9. In lab 1 you looked at strategic management and tactical management. Tactical management is:
   a. Determining the acres of corn to produce next year.
   b. Determining if you will place cattle on feed.
   c. Determining the number of replacement dairy heifers needed.
   d. Determining if you will cash rent the neighboring 80 acres next year.
   e. All of the above are tactical management functions.

The following information is for the following four questions (10-13).

“Herkey Hawkeye” is thinking about growing some corn this coming crop year (2009). 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 Hawkeye’s beat the Cyclones in football (which will be forever!!! This is starting next year.). The cash rent contract also indicates that the cash rent will increase by $30.00 per acre per year. You are surprised Herkey would sign such a contract but again Herkey has no idea what is going on.

<table>
<thead>
<tr>
<th>Pounds of Nitrogen/Per Acre</th>
<th>Bushels of Corn/Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>30</td>
<td>120</td>
</tr>
<tr>
<td>60</td>
<td>130</td>
</tr>
<tr>
<td>90</td>
<td>135</td>
</tr>
<tr>
<td>120</td>
<td>138</td>
</tr>
<tr>
<td>150</td>
<td>140</td>
</tr>
<tr>
<td>180</td>
<td>141</td>
</tr>
<tr>
<td>210</td>
<td>135</td>
</tr>
</tbody>
</table>

10. What is the value of the increased corn yield for the 30 pounds of nitrogen as ‘Herkey’ moves from 30 to 60 pounds of nitrogen? (The corn price is $5.00 per bushel).
   a. $5.00
   b. $10.00
   c. $50.00
   d. $650.00
   e. None of the above.
11. The marginal revenue as you increase corn production by going from 60 to 90 units of nitrogen is:
   a. $5.00
   b. $675.00
   c. $15.00
   d. $30.00
   e. None of the above.

12. Given that nitrogen costs $.50 per pound, how high would the price of corn need to go to before you would apply 150 pounds of nitrogen fertilizer?
   a. At least $4.50 per bushel
   b. At least $2.50 per bushel
   c. At least $5.25 per bushel
   d. At least $7.50 per bushel
   e. None of the above.

13. If the cost of nitrogen is 60 cents per pound and the corn price is $5.00 per bushel, how much nitrogen should Herkey apply to maximize profits?
   a. 60 pounds
   b. 90 pounds
   c. 120 pounds
   d. 150 pounds
   e. 180 pounds

14. In the short run, to justify if you are going to harvest a crop which is now standing in the field:  (You may be minimizing losses and not maximizing profit.)
   a. You will only harvest if you can pay all crop production cost.
   b. You will harvest the crop if you can sell it for a profit.
   c. You will harvest the crop if you can receive enough revenue (value) to cover your harvesting costs.
   d. If you can cover your variable costs, such as fertilizer, seed, etc.
   e. None of the above is correct for making the harvesting decision.
15. You are provided the following information:

<table>
<thead>
<tr>
<th>Units of Nitrogen</th>
<th>Marginal Value Product</th>
<th>Bushels of Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Given this and that the price of corn is $5.00 per bushel, what is the number of bushels of corn produced with 2 units of nitrogen?

a. 80 bushels
b. 160 bushels
c. 120 bushels
d. 96 bushels
e. None of the above.

16. In the attached soybean budget the cash rental rate (cash rent equivalent) of $155.00 is used to value the land. This is using the concept of:

a. Variable cost of a fixed item.
b. Cash cost for a fixed item.
c. Fixed cost for a variable item.
d. Opportunity cost.

e. None of the above.

17. Given the attached soybean budget, what is the total cost of producing a bushel of soybeans?

a. $7.76 per bushel
b. $4.63 per bushel
c. $3.13 per bushel
d. $349.11 per bushel
e. None of the above

18. Given the attached soybean budget, what is the gross revenue (total revenue) per acre if the soybean price is $12.00 per bushel?

a. $600
b. $349.11
c. $540
d. $450
e. None of the above.
19. Given the attached soybean budget, if the price of soybeans is $10.00 per bushel, what is the gross margin per acre?
   a. $100.89
d. $56.79
   b. $309.03
e. None of the above.
c. $241.86

20. In the attached soybean budget the labor:
   a. Is hired by the hour and only used if needed
d. Is someone who is paid an annual salary
   b. Could be either hired and used as needed or someone who is paid an annual salary

c. Only a and c above

21. In developing an enterprise budget, what are the areas to consider?
   a. Income or revenue
d. All of the above
c. Expenses
   d. Profit
   e. Only a and c above

22. The equal marginal (equi-marginal) principle states that:
   a. You will apply resources in production until the marginal revenue equals marginal cost
d. A limited input should be allocated among alternative uses in such a way that the marginal value products of the last unit used on each alternative are equal
c. In limited input situations you will typically be losing money
   d. All of the above

The following table applies to the following two questions. The information represents different hay and grain rations that will produce 150 pounds of beef at Betty’s Beef Brigade. The grain price is $.10 per pound and the hay price is $.04 per pound.

<table>
<thead>
<tr>
<th>Ration</th>
<th>Pounds of Hay</th>
<th>Pounds of Grain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,050</td>
<td>250</td>
</tr>
<tr>
<td>2</td>
<td>750</td>
<td>350</td>
</tr>
<tr>
<td>3</td>
<td>510</td>
<td>450</td>
</tr>
<tr>
<td>4</td>
<td>300</td>
<td>550</td>
</tr>
<tr>
<td>5</td>
<td>150</td>
<td>650</td>
</tr>
</tbody>
</table>

23. Given that each ration will produce 150 pounds of beef for Betty, what ration should Betty use if the cost of hay is $.04 per pound and the cost of grain is $.10 per pound?
   a. Ration 1
d. Ration 4
   b. Ration 2
e. Ration 5
   c. Ration 3

24. If the grain price increased $.10 per pound to $.20 and the hay price increased by $.04 per pound to $.08 Betty would:
   a. Increase her amount of hay fed as it did not increase as much as grain
   b. Decrease her amount of grain fed as it increased more than hay
c. Not change the ration
d. Increase the amount of beef produced
e. Reduce the size of the feedlot
The following information is for the next two questions.

You have the following information for alfalfa and grain sorghum production.

<table>
<thead>
<tr>
<th>Combination</th>
<th>Acres of Alfalfa</th>
<th>Acres of Grain Sorghum</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>1000</td>
</tr>
<tr>
<td>B</td>
<td>100</td>
<td>975</td>
</tr>
<tr>
<td>C</td>
<td>200</td>
<td>925</td>
</tr>
<tr>
<td>D</td>
<td>300</td>
<td>845</td>
</tr>
<tr>
<td>E</td>
<td>400</td>
<td>745</td>
</tr>
<tr>
<td>F</td>
<td>500</td>
<td>620</td>
</tr>
</tbody>
</table>

25. If the profit is $100 per acre of alfalfa and $85 per acre of grain sorghum, what combination of alfalfa and grain sorghum would you produce?
   a. A
   b. B
   c. C
   d. D
   e. E
   f. F

26. In this type of example you maximize profit where the:
   a. Marginal value product is equal to the marginal input cost
   b. Production possibilities curve in target to the iso revenue
   c. Iso cost is target to the marginal cost
   d. Marginal revenue is equal to the marginal cost
   e. None of the above

You have the following information for nitrogen application to corn production.

<table>
<thead>
<tr>
<th>Pounds of Nitrogen</th>
<th>Bushels of Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>110</td>
</tr>
<tr>
<td>50</td>
<td>115</td>
</tr>
<tr>
<td>100</td>
<td>125</td>
</tr>
<tr>
<td>150</td>
<td>140</td>
</tr>
<tr>
<td>200</td>
<td>160</td>
</tr>
<tr>
<td>250</td>
<td>185</td>
</tr>
<tr>
<td>300</td>
<td>180</td>
</tr>
</tbody>
</table>

27. If each unit of nitrogen (50 pounds) costs $.50 per pound or $10 for 50 pounds and the price of corn is $5.00, you would want to apply 250 pounds to maximize profit. You have 400 acres of corn and you want 50 tons (100,000 pounds) of nitrogen. However, you can only get access to 30 tons of nitrogen (60,000 pounds). How are you going to apply the nitrogen to the 400 acres? You are forced to grow 400 acres of corn.
   a. Apply 150 pounds to each of the 400 acres
   b. Apply 250 pounds to 240 acres and 0 pounds to 160 acres
   c. Apply 200 pounds to 300 acres and 0 pounds to 100 acres
   d. Can’t determine with the information provided.
   e. None of the above.
28. The name of the farm family we are using for AGPAQ this semester is:
   a. The Laurie and Steve Harvey Farm
   b. The Steve and Laurie Hovey Farm
   c. The Laurie and Steve Hovette Farm
   d. The Steve and Laurie Henry Farm
   e. None of the above

Part II. Bonus (2 pts.)

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

Kliebenstein

The old sage says:

There are two theories to arguing with the opposite gender. Neither one works.

Contentment is not the fulfillment of what you want, but the realization of what you already have.
Herbicide Tolerant Soybeans following Corn

<table>
<thead>
<tr>
<th></th>
<th>Fixed</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preharvest Machinery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>$14.20</td>
<td>$13.30</td>
</tr>
<tr>
<td>Seed, Chemical, etc.</td>
<td>Units</td>
<td></td>
</tr>
<tr>
<td>Seed @ $3.00 per 50 lb.</td>
<td>1.2</td>
<td>$37.20</td>
</tr>
<tr>
<td>Phosphate @ $0.50 per lb.</td>
<td>35</td>
<td>$17.50</td>
</tr>
<tr>
<td>Potash @ $0.27 per lb.</td>
<td>70</td>
<td>$18.90</td>
</tr>
<tr>
<td>Lime (yearly cost)</td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>Herbicide [*]</td>
<td>15.75</td>
<td></td>
</tr>
<tr>
<td>Crop Insurance</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Interest on preharvest variable costs</td>
<td>6.70</td>
<td></td>
</tr>
<tr>
<td>(8 months @ 8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$119.05</td>
</tr>
<tr>
<td><strong>Harvest Machinery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combine</td>
<td>$10.50</td>
<td>$7.30</td>
</tr>
<tr>
<td>Haul</td>
<td>1.04</td>
<td>1.12</td>
</tr>
<tr>
<td>Handle</td>
<td>0.45</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$11.99</td>
<td>$8.62</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.45 hours @ $11.00</td>
<td></td>
<td>$26.95</td>
</tr>
<tr>
<td><strong>Land</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash rent equivalent</td>
<td></td>
<td>$155.00</td>
</tr>
<tr>
<td><strong>Total fixed, variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per acre</td>
<td>$208.14</td>
<td>$140.97</td>
</tr>
<tr>
<td>Per bushel</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total cost per acre</strong></td>
<td></td>
<td>$349.11</td>
</tr>
<tr>
<td><strong>Total cost per bushel</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Chisel plow, tandem disk, field cultivate, plant, and spray. See the Estimated Machinery Costs table.

* Estimations do not include any insecticide or fungicide costs.