PART I. Multiple Choice. Indicate the best answer. (3 points each)

1. Which of the following are sources of cost of production information for preparing budgets for agricultural enterprises?
   a. Your past records
   b. Agri-business firms
   c. University Extension Service
   d. Other producers
   e. All of the above

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

3. In the short run, to justify keeping the dairy herd and remain producing milk, you should expect to receive enough total revenue from producing milk to pay for: (You may be minimizing losses and not maximizing profit.)
   a. the cost of raising replacement dairy heifers, along with interest and depreciation on dairy facilities.
   b. cost of buying replacement dairy cows and the fixed facility costs.
   c. cost of feed, veterinary, interest on borrowed money, and depreciation on the equipment used to clean the feedlot.
   d. the variable production costs plus taxes, interest and depreciation on the dairy facilities.
   e. the variable production costs.
   f. None of the above is correct.

4. Attached is an example budget for soybean production. If you use the budget for 40 bushels per acre and a soybean price of $6.50 per bushel, what is the gross margin per acre?
   a. $111.85
   b. $13.99
   c. $162.14
   d. $260.00
   e. None of the above

5. Given the attached soybean budget, what is the total cost of producing a bushel of soybeans?
   a. $3.70 per bushel
   b. $6.15 per bushel
   c. $5.75 per bushel
   d. $5.95 per bushel
   e. None of the above

6. In the attached soybean budget the cash rental rate (cash rent equivalent) of $105.00 is used to value the land. This is using the concept of:
a. variable cost for a fixed item.
b. cash cost for a fixed item.
c. fixed cost for a variable item.
d. opportunity cost.

7. If soybean production was your only production alternative in the short run how high would the expected price of soybeans need to be before you would decide to plant the crop. Use the attached budget with the values as provided.
   a. $2.45 or more per bushel
   b. $6.15 or more per bushel
   c. $5.50 or more per bushel
   d. $3.70 or more per bushel
   e. None of the above

8. Given the attached soybean budget, what is the gross revenue (total revenue) per acre if the soybean price is $7.00 per bushel?
   a. $280
   b. $182.14
   c. $131.85
   d. $33.99
   e. None of the above

9. Given the attached soybean budget, if the price of soybeans is $6.75 per bushel, what is the profit per acre?
   a. $270.00
   b. $172.14
   c. $121.85
   d. $23.99
   e. None of the above

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

11. The most common enterprise budgeting unit for crops in the USA is:
    a. hectare
    b. acre
    c. tons
    d. gallons
12. Budgets are a common tool used in analyzing farm alternatives or decisions. Examples of budgets could include:
   a. an enterprise budget.
   b. a whole farm budget.
   c. a partial budget.
   d. a cash flow budget.
   e. all of the above.
   f. none of the above

13. 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.

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

15. Given the attached “Finishing Feeder Pigs” budget, what is the income (gross revenue) per pig placed on feed if the death loss is 6 percent and the market hog price is $.35 per pound? The market weight is 250 pounds.
   a. $87.50
   b. $82.25
   c. $84.00
   d. $83.45
   e. none of the above

16. An isoquant is useful for considering:
   a. profit maximizing combinations of multiple outputs.
   b. the profit maximizing choice of a single input.
   c. cost minimizing combinations of inputs.
   d. none of the above.

17. The following represents combinations of outputs that are feasible, given some limiting factor(s):
   a. isoquant
   b. production function
   c. cost function
   d. production possibilities frontier
18. With a single input, profit is maximized where:
   a. the value marginal product of output equals the input price.
   b. marginal revenue equals marginal cost.
   c. the marginal rate of substitution equals the inverse price ratio.
   d. a and b

19. With a single input, marginal physical product is typically ___________ for higher levels of input usage.
   a. higher
   b. lower
   c. doesn’t change
   d. none of the above

20. With two inputs, x1 and x2, diminishing marginal product of each input implies:
   a. the marginal rate of substitution of x1 for x2 increases (in absolute value) as x1 increases.
   b. the marginal rate of substitution of x1 for x2 decreases (in absolute value) as x1 increases.
   c. the marginal rate of substitution of x1 for x2 decreases (in absolute value) as x1 decreases.
   d. the marginal rate of substitution of x1 for x2 increases (in absolute value) as x1 decreases.

Part II: Short answer or essay.

1. (5 points) Listed below are several cost items which would be included in a budget. Indicate if they would be a variable cost (VC) or a fixed cost (FC) item.

   _____ Interest on combine
   _____ Seed for crop production
   _____ Feed fed to livestock
   _____ Fuel for hauling crop
   _____ Hired labor (pay by the hour - only pay if needed)

2. (5 points) A production function is the most complete way of representing a production process or technology. True or false? Explain.
3. (5 points) It’s impossible to maximize profits without ensuring that yields are at a maximum. True or false? Explain.

4. (5 points) Explain in your own words why you would expect a declining marginal physical product in most production systems.

5. (5 points) Given cost minimizing levels of two inputs used in the production of some output, list three factors that could lead to an increase in the use of one of the inputs (and, thus, a decrease in the use of the other input).
6. (5 points) With a single input, profit is maximized where price times the marginal physical product of the input equals its unit cost. True or False? Explain (and draw a picture).

7. (10 points) You have 200 units each of inputs $x_1$ and $x_2$. One unit of output $y_1$ requires use of 1 unit of the first input and 2 units of the second input. One unit of output $y_2$ requires 2 units of the first input, but none of the second input. Net revenues of each output are $1/unit. Use the methods discussed in class to determine the profit maximizing combinations of outputs $y_1$ and $y_2$.

PART III. Bonus (2 pts)

How do you spell the last names of the two lecture instructors in this class?

_________________________________________________________________

_________________________________________________________________