

2013
Louisiana State FFA Farm Business Management
Career Development Event

Administered by

Department of Agricultural Sciences
Louisiana Tech University

and

Department of Agricultural Economics & Agribusiness
Louisiana State University

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**LOUISIANA STATE FFA
FARM BUSINESS MANAGEMENT
CAREER DEVELOPMENT EVENT**

2013

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**LOUISIANA STATE FFA FARM BUSINESS MANAGEMENT
CAREER DEVELOPMENT EVENT
2013**

**Part I – Short Multiple Choice Section
(100 Total Possible Points)**

Select Best Answer Only

1. The difference between the price that consumers pay for the final good and the price received by agricultural producers for the raw product is represented by the:
 - a. profit margin.
 - b. marketing margin.
 - c. price-cost differential
 - d. cash flow increment.

2. A deficit of \$3,500 at the end of May in a monthly cash flow analysis indicates:
 - a. that bankruptcy is unavoidable.
 - b. poor but sustainable management.
 - c. the farm organization is not profitable.
 - d. cash must be borrowed.

3. In a market economy, price serves to:
 - a. exclude certain buyers.
 - b. determine production levels and ration consumption levels.
 - c. mark up wholesale product costs by a preset percentage.
 - d. all of the above.

4. A market failure occurs when:
 - a. farmers do not receive a fair price.
 - b. weather conditions cause massive crop failures.
 - c. the basic marketing functions are not always performed.
 - d. the market fails to act in the best interest of society.

5. An agricultural supply cooperative manager might increase sales through:
 - a. advertising and promotion.
 - b. higher prices.
 - c. low inventory levels.
 - d. ignoring competitors.

6. Russell Farms, Inc. is purchasing a new tractor for \$85,000. The equipment dealer will finance the tractor under the following terms: 30 percent down payment with the balance repaid in equal annual payments over the next five years. The interest rate charged on the loan is 10 percent per year. Russell Farms expects the tractor to last for 10 years and have a salvage value of \$8,000. How much interest will Russell Farms pay in the first year of the loan?
- a. \$2,750
 - b. \$4,390
 - c. \$5,950
 - d. \$8,500
7. The legal instrument given to specify that certain land has been pledged to guarantee repayment of debt is:
- a. promissory note.
 - b. mortgage.
 - c. will.
 - d. deed.
8. Which of the following is not considered a basic principle of agricultural cooperatives:
- a. ownership by member-patrons.
 - b. democratic control.
 - c. provide services at cost.
 - d. high return on equity capital.
9. An estate is:
- a. a large, developed property with many acres.
 - b. a property that is co-owned.
 - c. a piece of property that is for sale.
 - d. the assets that are left at a person's death.
10. Condemnation refers to the legal power of the government to take private property, with compensation, for public use. This acquisition of property is known as:
- a. escheat.
 - b. easement.
 - c. zoning.
 - d. eminent domain.
11. Planning for retirement, transfer of property, and to keep the farm business intact are important in:
- a. income tax management.
 - b. estate planning.
 - c. growth planning.
 - d. net worth analyses.

12. The decline in value of an asset over its useful life associated with use, age, and obsolescence is:
- appreciation.
 - amortization.
 - depreciation.
 - devaluation.
13. In the macroeconomy,
- monetary policy deals with the money supply.
 - monetary policy deals with credit conditions or interest rates.
 - fiscal policy deals with federal government spending and taxation.
 - all of the above.
14. Farm budgets differ from farm records in that:
- records are a history of what has happened, while budgets are a projection of what will happen.
 - records are not used for tax purposes, but budgets are.
 - budgets are a history of what has happened, while records are a projection of what will happen.
 - records are simple and easy to keep, while budgets are difficult and very time-consuming.
15. The process where a business buys successive production and/or marketing stages or buys input supply stages is known as:
- horizontal integration.
 - diagonal integration.
 - vertical integration.
 - production segregation.
16. Along the marketing chain:
- value is added.
 - profit margins remain constant.
 - consumer utility is decreased.
 - producer profits are increased.
17. Julie Bowen owns a 10,000 bushel grain bin and is trying to decide whether to store or sell this year's crop. She should store it if:
- The current cash price does not cover production costs.
 - The future price will probably be the same as the current cash price.
 - The grain bin is paid for, storage is always profitable.
 - The future price exceeds the cash price by at least enough to cover variable storage costs.

18. Janet Smith has assets of \$900,000, total liabilities of \$450,000, and current notes due of \$75,000. What is his ratio of assets to liabilities?
- 2.0:1
 - 2.5:1
 - 3.4:1
 - 7.5:1
19. The demand for beef is characterized as price inelastic. If beef prices rise then:
- consumers will buy the same amount of beef as before.
 - consumers will buy lower quantities of beef but total expenditures on beef will rise.
 - consumers will buy higher quantities of beef and total expenditures on beef will rise.
 - consumer will buy lower quantities of beef and total expenditures on beef will fall.
20. Which of the following should be listed in the account book as the purchase of a capital asset?
- a building recently built.
 - feed purchased for livestock.
 - vaccine for cattle.
 - tools used for mending fence.
21. A substitute good is defined as one which can be used to replace another good. An example of this relationship would be butter and margarine. An example of a complementary set of goods would be:
- potatoes and rice.
 - beef and pork.
 - bacon and eggs.
 - apples and oranges.
22. The quick ratio is a measurement of liquidity and is used to indicate an operation's capacity to meet short-term obligations. It is defined as:
- current assets minus receivables divided by current liabilities.
 - current assets divided by the current liabilities.
 - total debt divided by total assets.
 - cash divided by current liabilities.
23. A firm under pure competition:
- is a price taker.
 - buys all needed inputs from purely competitive firms.
 - produces a differentiated product.
 - cannot be distinguished in pricing and output policies from a firm operating under imperfect competition.
24. A cash flow budget projected for the next year can provide information on:
- return to the farm operator's labor and management.
 - projected borrowing requirements and repayment ability.
 - net worth of the farm business.
 - rate of return on the farm investment.

25. You and your sister have formed a partnership to operate your grain beef farm. She has contributed the farm and cattle and you provide the equipment and labor. Your contribution is valued at 65%. Depreciation on equipment is charged at 25%. Assume that profits, if any, are split according to the percentage of contribution to the partnership. Last year the farm realized a profit of \$90,000. What was your sister's share?
- a. \$24,500
 - b. \$27,250
 - c. \$31,500
 - d. \$58,500
26. The family farm corporation offers which of the following advantages over the sole proprietorship:
- a. limited liability and the owner in direct control.
 - b. limited liability and continuous existence.
 - c. low startup costs and owner in direct control.
 - d. continuous existence and less regulated.
27. A producer will need \$25,000 four years from now for a down payment on a land purchase. If the producer deposits a lump sum of cash in a savings account earning 3.0 percent interest compounded annually, how much would he need to deposit today in order to have the needed \$25,000 four years from now? Assume no other contributions are in, or will be made to, the account.
- a. \$19,511.42
 - b. \$22,212.18
 - c. \$24,271.84
 - d. \$25,638.38
28. The fact that farmers continue to receive a decreasing portion of the food dollar indicates:
- a. the demand by consumers for increased processing and marketing services.
 - b. that food prices are higher today than in the past.
 - c. the need for government support prices.
 - d. inefficiency is the marketing system.
29. A loan to purchase a tractor is often called:
- a. an intermediate term loan.
 - b. a mortgage.
 - c. an operating loan.
 - d. a long term loan.

30. For a fixed input level, assume the following marginal outputs in production levels of wheat and apple juice for the United States and the European Union:

	<u>Wheat (bu)</u>	or	<u>Apple Juice (gal)</u>
Unites States	20		5
European Union	4		12

- a. the United States has an absolute advantage in the production of wheat.
- b. the European Union has an absolute advantage in the production of apple juice.
- c. the Unites States has a comparative advantage in the production of wheat.
- d. all of the above.
31. If beef supplies are decreased and consumer demand for beef due to all factors other than price is unchanged, the price of beef will:
- a. increase.
- b. there is insufficient information to draw a conclusion.
- c. probably be unchanged.
- d. decrease.
32. An increase in net worth can result from:
- a. farm losses.
- b. decreasing land values.
- c. increasing land values.
- d. increasing debt.
33. Insurance provides a safeguard through which the policy holder is protected against uncertain losses. Life insurance can provide coverage against:
- a. personal injury.
- b. fire, theft, windstorm, etc.
- c. drought.
- d. death.
34. Economies of scale exist when:
- a. a doubling of all inputs creates a twenty-five percent increase in output.
- b. an increase of all inputs creates a decline in output.
- c. a doubling of all inputs more than doubles output.
- d. when proportionate increases in all inputs creates no change in output.
35. If a farmer installs a new confinement feeding system for cattle and the price of market beef suddenly drops, he should:
- a. stop feeding grain and finish on pasture and roughages.
- b. stop feeding cattle and convert the building to a swine finishing house.
- c. reduce the number of cattle being fed.
- d. continue feeding cattle as long as variable production costs are covered.

36. The equilibrium price of a product is the price where quantity demanded equals quantity supplied. Given the following supply and demand schedule for corn, what is the equilibrium price of corn?

Price (per bushel)	Quantity Demanded Millions of Bu.	Quantity Supplied Millions of Bu.
4.00	2,500	1,200
4.50	2,250	1,900
5.00	2,000	2,000
5.50	1,900	2,975
6.00	1,850	3,000

- a. \$4.50
b. \$5.50
c. \$4.00
d. \$5.00
37. An enterprise budget is:
- a. a plan for using the firm's resources during some future period.
b. a plan for producing an agricultural commodity that shows the costs and returns, resources used, and yield for one production unit of the commodity.
c. the basic tool used in analyzing a change in farm operations, and estimating the change in net income.
d. a plan that shows expected costs and returns, resources used, and yields for the total farm.
38. Solvency has to do with:
- a. the ability of the business to meet short-term debt obligations.
b. the ability of the business to meet weekly payroll.
c. the amount of funds that are in the cash account.
d. the ability of the business to avoid bankruptcy.
39. An artificially imposed price ceiling generally results in:
- a. higher profits for producers.
b. excess supply.
c. excess demand.
d. excess income taxes.
40. The difference between a cash price and a futures price for a good is commonly referred to as:
- a. market quotation.
b. a bid price.
c. the margin.
d. the basis.

41. Power of Attorney is best described as:
- the political clout of an attorney.
 - a formal written authorization given by a principal to an agent.
 - an attorney's weightlifting ability.
 - the courtroom privileges given to an attorney.
42. The effectiveness of prices in reflecting the costs of moving products through the system is called:
- pricing efficiency.
 - marketing management.
 - price flexibility.
 - cost-based pricing.
43. Diminishing marginal utility in the consumption of consumer goods results in:
- recognition of declining quality in the goods being consumed.
 - higher prices for consumer goods.
 - diversity in consumption.
 - an increase in satisfaction as each additional unit is consumed.
44. If a cattle producer hedges beyond the number of cattle owned, the producer becomes:
- bankrupt.
 - frightened.
 - wealthy.
 - a speculator.
45. The rational corn producer would add additional units of nitrogen fertilizer to a growing corn crop:
- until total corn yield per acre was maximized.
 - until average corn yield per acre was maximized.
 - until the marginal return per unit of nitrogen equals the marginal cost per unit of nitrogen.
 - until the cost of nitrogen increased.
46. A soybean farmer had total assets of \$1,250,000, of which land was valued at \$625,000. Total liabilities were \$580,000 on December 31, 2012. His net worth as of the end of the 2012 was:
- \$45,000.
 - \$670,000.
 - \$1,250,000.
 - \$1,295,000.
47. When a farmer decides that a parcel of land "isn't worth the price," what does he mean?
- The price is high.
 - The farmer doesn't have a down payment.
 - The present value of expected income over time that the land will produce is less than the asking price.
 - The farmer doesn't have sufficient credit to buy.

48. Liability of a general partner in a partnership is limited to:
- a. all debts and obligations of the partnership up to the amount of his investment in the partnership.
 - b. a maximum of \$50,000.
 - c. all debts and obligations of the partnership.
 - d. all debts and obligations of the partnership up to the amount of his share of the assets in the partnership.
49. Which of the following could be considered a current asset:
- a. land.
 - b. accounts receivable.
 - c. buildings.
 - d. machinery.
50. The ability to repay a loan is best measured by:
- a. cash flow statement.
 - b. net worth statement.
 - c. balance sheet.
 - d. income statement.

PART II

PROBLEM SOLVING MULTIPLE CHOICE

150 Points

**Complete all computations to two decimal places.
Please read questions carefully.**

A. BUDGET ANALYSIS (45 Points)

Tom Lewis is a farmer in Northeast Louisiana and is currently planning his farming operations for the upcoming year. His farming operation includes 1,000 acres, with 400 acres of corn and 600 acres of soybeans. Please assist Mr. Lewis in making management decisions for the coming year. Use the attached soybean and corn budgets (Tables 1 and 2, page 20) to address questions 51 - 65.

51. Total specified costs for the 400 acres of corn are:
- | | |
|--------------|--------------|
| a. \$35,200 | c. \$239,200 |
| b. \$204,000 | d. \$274,400 |
52. Total specified costs for the 600 acres of soybeans are:
- | | |
|--------------|--------------|
| a. \$46,800 | c. \$262,800 |
| b. \$216,000 | d. \$309,600 |
53. Total fixed costs for the 600 acres of soybeans are:
- | | |
|-------------|--------------|
| a. \$31,200 | c. \$55,234 |
| b. \$46,800 | d. \$262,026 |
54. What is the expected total soybean production for Mr. Lewis?
- | | |
|---------------|---------------|
| a. 585 bu. | c. 45 bu. |
| b. 21,000 bu. | d. 27,000 bu. |
55. Estimate what it cost Mr. Lewis to produce a bushel of corn.
- | | |
|-----------|-----------|
| a. \$3.99 | c. \$7.25 |
| b. \$4.50 | d. \$8.85 |
56. Estimate what it cost Mr. Lewis to produce a bushel of soybeans.
- | | |
|-----------|------------|
| a. \$6.55 | c. \$12.00 |
| b. \$9.73 | d. \$13.10 |
57. Assume that Mr. Lewis is concerned about the price he must receive to cover his total cost of corn production. What is the break-even selling price for corn?
- | | |
|-----------|-----------|
| a. \$2.35 | c. \$3.99 |
| b. \$3.00 | d. \$6.70 |
58. Assume that Mr. Lewis is concerned about the price he must receive to cover his total cost of soybean production. What is the break-even selling price for soybeans?
- | | |
|------------|------------|
| a. \$10.52 | c. \$7.25 |
| b. \$9.73 | d. \$12.50 |

B. ENTERPRISE COMBINATION POSSIBILITIES (12 Points)

Faraway Farms, Inc., like any other business, has a given amount of resources available for production. These resources include land, labor, capital, and management. Faraway Farms must choose the possible combination of enterprises that will contribute toward maximizing the farm's profits, given the resources that are available. Assuming Faraway Farms decides to produce grain sorghum and soybeans for a given year, they must decide which combination of grain sorghum and soybeans to produce on the 320 acres that are available to them. Use the table below to select the optimal enterprise combination in questions 66 – 69, at the projected prices for grain sorghum and soybeans that are indicated.

Possible Enterprise Combinations	Y ₁ Grain Sorghum (bushels)	Y ₂ Soybeans (bushels)	Marginal Rate of Product Substitution MRPS _{Y₁,Y₂} = $\Delta Y_2 / \Delta Y_1$
A	0	7,500	-----
B	2,000	7,000	
C	4,000	6,350	
D	6,000	5,575	
E	8,000	4,550	
F	10,000	3,100	
G	12,000	0	

66. Grain sorghum projected to be \$4.17 per bu; soybeans projected to be \$10.69 per bu.
- a. Combination A
b. Combination B
c. Combination C
d. Combination D
67. Grain sorghum projected to be \$6.13 per bu; soybeans projected to be \$3.95 per bu.
- a. Combination A
b. Combination C
c. Combination E
d. Combination G
68. Grain sorghum projected to be \$5.00 per bu; soybeans projected to be \$9.80 per bu.
- a. Combination C
b. Combination D
c. Combination E
d. Combination F
69. Grain sorghum projected to be \$3.25 per bu; soybeans projected to be \$13.00 per bu.
- a. Combination A
b. Combination B
c. Combination C
d. Combination D

C. LIVESTOCK ENTERPRISE ANALYSIS (21 Points)

Mr. Lewis has one 250 acre field that is fenced and could be used to double-crop soybeans and ryegrass for winter grazing of steers. It would cost him \$60.00 per acre to produce the ryegrass and he can stock 1.5 (450 pound) steers per acre. Mr. Lewis anticipates average daily gains of 1.5 pounds per steer for 150 days of grazing. Medication costs would amount to \$5.00 per head. A neighboring farmer indicated he would deliver the animals to Mr. Lewis' place for \$1.50 per pound if he should decide to winter graze cattle. Mr. Lewis believes that he can sell the cattle in the spring at the farm for \$1.40 per pound. Please assist Mr. Lewis in analyzing this enterprise by answering the following questions.

70. How many steers could Mr. Lewis graze?
- a. 200 head
b. 300 head
c. 375 head
d. 450 head
71. On a per steer basis, what is the pasture cost?
- a. \$33.00
b. \$40.00
c. \$74.25
d. \$60.00
72. What is the cost of buying the 450 pound steer?
- a. \$360.00
b. \$540.00
c. \$305.00
d. \$675.00
73. What is the total cost of producing a steer to be sold in the spring?
- a. \$465.00
b. \$700.00
c. \$720.00
d. \$800.00
74. How many pounds is the steer expected to gain during the 150 days?
- a. 100 pounds
b. 300 pounds
c. 225 pounds
d. 675 pounds
75. What is the value of the steer to be sold in the spring?
- a. \$740.00
b. \$945.00
c. \$600.00
d. \$648.00
76. What would be the net return per steer?
- a. \$ 88.00
b. \$108.00
c. \$150.00
d. \$225.00

E. LOAN AMORTIZATION SCHEDULE (15 points)

An agricultural producer finances a tractor for three years, with annual payments. The interest rate charged on the loan is 10 percent APR (annual percentage rate). After making a down payment, the principal financed is \$40,000, resulting in an annual payment of \$16,084.59. Complete the following loan amortization schedule by selecting the value that is missing in the table.

Year	Beginning Balance	Annual Payment	Interest Paid	Principal Repayment	Ending Balance
1	\$40,000.00	\$16,084.59	\$4,000.00	Question 81	\$27,915.41
2	\$27,915.41	\$16,084.59	Question 82	Question 83	\$14,622.36
3	Question 84	\$16,084.59	\$1,462.24	Question 85	\$0

81. The principal repayment in year 1 is:
- a. \$6,250.29 c. \$12,084.59
b. \$10,245.67 d. \$14,211.35
82. The interest paid in year 2 is:
- a. \$720.00 c. \$1,893.45
b. \$1,245.42 d. \$2,791.54
83. The principal repayment in year 2 is:
- a. \$13,293.05 c. \$17,042.23
b. \$15,075.12 d. \$17,845.09
84. The beginning balance in year 3 is:
- a. \$ 0 c. \$16,084.59
b. 14,622.36 d. \$27,915.41
85. The principal repayment in year 3 is:
- a. \$ 0 c. \$16,084.59
b. 14,622.36 d. \$27,915.41

F. PRODUCTION RELATIONSHIP (15 Points)

The following data relate to the use of nitrogen in the production of corn. Please address the following relationships given the data below.

Input Level (Nitrogen)	Total Physical Product (Bushels of Corn)	Average Physical Product	Marginal Physical Product
0	0	-----	-----
1	18		
2	32		
3	40		
4	47		
5	50		
6	52		
7	53		
8	53		

86. What is average product when 4 units of nitrogen are used?
 a. 40.00 b. 18.22 c. 11.75 d. 20.11
87. What is marginal product when 4 units of nitrogen are used?
 a. 7 b. 9 c. 20 d. 25
88. What is marginal product when 8 units of nitrogen are used?
 a. 8 b. 27.50 c. 0 d. 42
89. At what nitrogen input level does the rational production area begin (stage 2 of production)?
 a. 0 b. 1 c. 2 d. 3
90. What nitrogen input level defines the beginning of stage 3 of production?
 a. 0 b. 4 c. 6 d. 8

H. NET WORTH STATEMENT (15 Points)

Please assist Mr. Mayeux in completing his current net worth statement. Assume that he has provided you with the following information and you are to estimate the statement for May 1, 2013.

Soybean inventory	\$ 25,000	Savings account	\$ 35,000
Cash value of life insurance	20,000	Machinery	225,000
Real estate	725,000	Accounts payable	17,000
Total machinery debt	125,000	Total land debt	275,000
Notes payable-Nov. 1, 2012	45,500	Unused crop supplies	6,500
Tractors	200,000	Property taxes	2,725

96. What is the total value of current assets?
- a. \$35,000
b. \$55,000
c. \$80,000
d. \$86,500
97. What is the total value of intermediate assets?
- a. \$100,000
b. \$200,000
c. \$225,000
d. \$425,000
98. What is the total value of long term assets?
- a. \$225,000
b. \$725,000
c. \$200,000
d. \$275,000
99. What is the value of total assets?
- a. \$355,000
b. \$380,000
c. \$960,500
d. \$1,236,500
100. What is the value of equity?
- a. \$242,500
b. \$540,275
c. \$650,250
d. \$771,275

Table 1. Estimated costs per acre, Roundup Ready Corn, Stale Seedbed, Irrigated, 8-row equipment, 38 inch, Alluvial Soil, Louisiana, 2011.

ITEM	PRICE \$/bu.	QUANTITY bu./ac.	AMOUNT \$/acre
INCOME			
Corn	6.50	150.0000	975.00

TOTAL INCOME			975.00

TOTAL DIRECT EXPENSES			510.00
RETURNS ABOVE DIRECT EXPENSES			465.00
TOTAL FIXED EXPENSES			88.00

TOTAL SPECIFIED EXPENSES			598.00
RETURNS ABOVE TOTAL SPECIFIED EXPENSES			377.00

Table 2. Estimated costs per acre, Roundup Ready Soybeans, Stale Seedbed, Irrigated, 8-row equipment, 38 inch, Alluvial Soil, Louisiana, 2011.

ITEM	PRICE \$/bu.	QUANTITY bu./ac.	AMOUNT \$/acre
INCOME			
Soybeans	13.00	45.0000	585.00

TOTAL INCOME			585.00

TOTAL DIRECT EXPENSES			360.00
RETURNS ABOVE DIRECT EXPENSES			225.00
TOTAL FIXED EXPENSES			78.00

TOTAL SPECIFIED EXPENSES			438.00
RETURNS ABOVE TOTAL SPECIFIED EXPENSES			147.00

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 - b. mortgage.
 - c. will.
 - d. deed.
- D 8. Which of the following is not considered a basic principle of agricultural cooperatives:
- a. ownership by member-patrons.
 - b. democratic control.
 - c. provide services at cost.
 - d. high return on equity capital.
- D 9. An estate is:
- a. a large, developed property with many acres.
 - b. a property that is co-owned.
 - c. a piece of property that is for sale.
 - d. the assets that are left at a person's death.
- D 10. Condemnation refers to the legal power of the government to take private property, with compensation, for public use. This acquisition of property is known as:
- a. escheat.
 - b. easement.
 - c. zoning.
 - d. eminent domain.
- B 11. Planning for retirement, transfer of property, and to keep the farm business intact are important in:
- a. income tax management.
 - b. estate planning.
 - c. growth planning.
 - d. net worth analyses.

- C 12. The decline in value of an asset over its useful life associated with use, age, and obsolescence is:
- appreciation.
 - amortization.
 - depreciation.
 - devaluation.
- D 13. In the macroeconomy,
- monetary policy deals with the money supply.
 - monetary policy deals with credit conditions or interest rates.
 - fiscal policy deals with federal government spending and taxation.
 - all of the above.
- A 14. Farm budgets differ from farm records in that:
- records are a history of what has happened, while budgets are a projection of what will happen.
 - records are not used for tax purposes, but budgets are.
 - budgets are a history of what has happened, while records are a projection of what will happen.
 - records are simple and easy to keep, while budgets are difficult and very time-consuming.
- C 15. The process where a business buys successive production and/or marketing stages or buys input supply stages is known as:
- horizontal integration.
 - diagonal integration.
 - vertical integration.
 - production segregation.
- A 16. Along the marketing chain:
- value is added.
 - profit margins remain constant.
 - consumer utility is decreased.
 - producer profits are increased.
- D 17. Julie Bowen owns a 10,000 bushel grain bin and is trying to decide whether to store or sell this year's crop. She should store it if:
- The current cash price does not cover production costs.
 - The future price will probably be the same as the current cash price.
 - The grain bin is paid for, storage is always profitable.
 - The future price exceeds the cash price by at least enough to cover variable storage costs.

- A 18. Janet Smith has assets of \$900,000, total liabilities of \$450,000, and current notes due of \$75,000. What is his ratio of assets to liabilities?
- a. 2.0:1
 - b. 2.5:1
 - c. 3.4:1
 - d. 7.5:1
- B 19. The demand for beef is characterized as price inelastic. If beef prices rise then:
- a. consumers will buy the same amount of beef as before.
 - b. consumers will buy lower quantities of beef but total expenditures on beef will rise.
 - c. consumers will buy higher quantities of beef and total expenditures on beef will rise.
 - d. consumer will buy lower quantities of beef and total expenditures on beef will fall.
- A 20. Which of the following should be listed in the account book as the purchase of a capital asset?
- a. a building recently built.
 - b. feed purchased for livestock.
 - c. vaccine for cattle.
 - d. tools used for mending fence.
- C 21. A substitute good is defined as one which can be used to replace another good. An example of this relationship would be butter and margarine. An example of a complementary set of goods would be:
- a. potatoes and rice.
 - b. beef and pork.
 - c. bacon and eggs.
 - d. apples and oranges.
- D 22. The quick ratio is a measurement of liquidity and is used to indicate an operation's capacity to meet short-term obligations. It is defined as:
- a. current assets minus receivables divided by current liabilities.
 - b. current assets divided by the current liabilities.
 - c. total debt divided by total assets.
 - d. cash divided by current liabilities.
- A 23. A firm under pure competition:
- a. is a price taker.
 - b. buys all needed inputs from purely competitive firms.
 - c. produces a differentiated product.
 - d. cannot be distinguished in pricing and output policies from a firm operating under imperfect competition.
- B 24. A cash flow budget projected for the next year can provide information on:
- a. return to the farm operator's labor and management.
 - b. projected borrowing requirements and repayment ability.
 - c. net worth of the farm business.
 - d. rate of return on the farm investment.

- C 25. You and your sister have formed a partnership to operate your grain beef farm. She has contributed the farm and cattle and you provide the equipment and labor. Your contribution is valued at 65%. Depreciation on equipment is charged at 25%. Assume that profits, if any, are split according to the percentage of contribution to the partnership. Last year the farm realized a profit of \$90,000. What was your sister's share?
- a. \$24,500
 - b. \$27,250
 - c. \$31,500
 - d. \$58,500
- B 26. The family farm corporation offers which of the following advantages over the sole proprietorship:
- a. limited liability and the owner in direct control.
 - b. limited liability and continuous existence.
 - c. low startup costs and owner in direct control.
 - d. continuous existence and less regulated.
- B 27. A producer will need \$25,000 four years from now for a down payment on a land purchase. If the producer deposits a lump sum of cash in a savings account earning 3.0 percent interest compounded annually, how much would he need to deposit today in order to have the needed \$25,000 four years from now? Assume no other contributions are in, or will be made to, the account.
- a. \$19,511.42
 - b. \$22,212.18
 - c. \$24,271.84
 - d. \$25,638.38
- A 28. The fact that farmers continue to receive a decreasing portion of the food dollar indicates:
- a. the demand by consumers for increased processing and marketing services.
 - b. that food prices are higher today than in the past.
 - c. the need for government support prices.
 - d. inefficiency is the marketing system.
- A 29. A loan to purchase a tractor is often called:
- a. an intermediate term loan.
 - b. a mortgage.
 - c. an operating loan.
 - d. a long term loan.

- D 30. For a fixed input level, assume the following marginal outputs in production levels of wheat and apple juice for the United States and the European Union:

	<u>Wheat (bu)</u>	or	<u>Apple Juice (gal)</u>
Unites States	20	or	5
European Union	4	or	12

- a. the United States has an absolute advantage in the production of wheat.
 b. the European Union has an absolute advantage in the production of apple juice.
 c. the Unites States has a comparative advantage in the production of wheat.
 d. all of the above.
- A 31. If beef supplies are decreased and consumer demand for beef due to all factors other than price is unchanged, the price of beef will:
- a. increase.
 b. there is insufficient information to draw a conclusion.
 c. probably be unchanged.
 d. decrease.
- C 32. An increase in net worth can result from:
- a. farm losses.
 b. decreasing land values.
 c. increasing land values.
 d. increasing debt.
- D 33. Insurance provides a safeguard through which the policy holder is protected against uncertain losses. Life insurance can provide coverage against:
- a. personal injury.
 b. fire, theft, windstorm, etc.
 c. drought.
 d. death.
- C 34. Economies of scale exist when:
- a. a doubling of all inputs creates a twenty-five percent increase in output.
 b. an increase of all inputs creates a decline in output.
 c. a doubling of all inputs more than doubles output.
 d. when proportionate increases in all inputs creates no change in output.
- D 35. If a farmer installs a new confinement feeding system for cattle and the price of market beef suddenly drops, he should:
- a. stop feeding grain and finish on pasture and roughages.
 b. stop feeding cattle and convert the building to a swine finishing house.
 c. reduce the number of cattle being fed.
 d. continue feeding cattle as long as variable production costs are covered.

- D 36. The equilibrium price of a product is the price where quantity demanded equals quantity supplied. Given the following supply and demand schedule for corn, what is the equilibrium price of corn?

Price (per bushel)	Quantity Demanded Millions of Bu.	Quantity Supplied Millions of Bu.
4.00	2,500	1,200
4.50	2,250	1,900
5.00	2,000	2,000
5.50	1,900	2,975
6.00	1,850	3,000

- a. \$4.50
 b. \$5.50
 c. \$4.00
 d. \$5.00
- B 37. An enterprise budget is:
- a. a plan for using the firm's resources during some future period.
 b. a plan for producing an agricultural commodity that shows the costs and returns, resources used, and yield for one production unit of the commodity.
 c. the basic tool used in analyzing a change in farm operations, and estimating the change in net income.
 d. a plan that shows expected costs and returns, resources used, and yields for the total farm.
- D 38. Solvency has to do with:
- a. the ability of the business to meet short-term debt obligations.
 b. the ability of the business to meet weekly payroll.
 c. the amount of funds that are in the cash account.
 d. the ability of the business to avoid bankruptcy.
- C 39. An artificially imposed price ceiling generally results in:
- a. higher profits for producers.
 b. excess supply.
 c. excess demand.
 d. excess income taxes.
- D 40. The difference between a cash price and a futures price for a good is commonly referred to as:
- a. market quotation.
 b. a bid price.
 c. the margin.
 d. the basis.

- B 41. Power of Attorney is best described as:
- the political clout of an attorney.
 - a formal written authorization given by a principal to an agent.
 - an attorney's weightlifting ability.
 - the courtroom privileges given to an attorney.
- A 42. The effectiveness of prices in reflecting the costs of moving products through the system is called:
- pricing efficiency.
 - marketing management.
 - price flexibility.
 - cost-based pricing.
- C 43. Diminishing marginal utility in the consumption of consumer goods results in:
- recognition of declining quality in the goods being consumed.
 - higher prices for consumer goods.
 - diversity in consumption.
 - an increase in satisfaction as each additional unit is consumed.
- D 44. If a cattle producer hedges beyond the number of cattle owned, the producer becomes:
- bankrupt.
 - frightened.
 - wealthy.
 - a speculator.
- C 45. The rational corn producer would add additional units of nitrogen fertilizer to a growing corn crop:
- until total corn yield per acre was maximized.
 - until average corn yield per acre was maximized.
 - until the marginal return per unit of nitrogen equals the marginal cost per unit of nitrogen.
 - until the cost of nitrogen increased.
- B 46. A soybean farmer had total assets of \$1,250,000, of which land was valued at \$625,000. Total liabilities were \$580,000 on December 31, 2012. His net worth as of the end of the 2012 was:
- \$45,000.
 - \$670,000.
 - \$1,250,000.
 - \$1,295,000.
- C 47. When a farmer decides that a parcel of land "isn't worth the price," what does he mean?
- The price is high.
 - The farmer doesn't have a down payment.
 - The present value of expected income over time that the land will produce is less than the asking price.
 - The farmer doesn't have sufficient credit to buy.

- C 48. Liability of a general partner in a partnership is limited to:
- a. all debts and obligations of the partnership up to the amount of his investment in the partnership.
 - b. a maximum of \$50,000.
 - c. all debts and obligations of the partnership.
 - d. all debts and obligations of the partnership up to the amount of his share of the assets in the partnership.
- B 49. Which of the following could be considered a current asset:
- a. land.
 - b. accounts receivable.
 - c. buildings.
 - d. machinery.
- A 50. The ability to repay a loan is best measured by:
- a. cash flow statement.
 - b. net worth statement.
 - c. balance sheet.
 - d. income statement.

PART II

PROBLEM SOLVING MULTIPLE CHOICE

150 Points

**Complete all computations to two decimal places.
Please read questions carefully.**

- B 59. Assume that Mr. Lewis is concerned about the yield he must receive to cover his total cost of production. What is the break-even yield for corn?
- a. 75 bu. c. 120 bu.
b. 92 bu. d. 144 bu.
- A 60. Assume that Mr. Lewis is concerned about the yield he must receive to cover his total cost of production. What is the break-even yield for soybeans?
- a. 33.69 bu. c. 42.85 bu.
b. 27.45 bu. d. 16.35 bu.
- D 61. What is Mr. Lewis' gross income from his soybean crop?
- a. \$244,000 c. \$543,250
b. \$280,000 d. \$351,000
- C 62. What is Mr. Lewis' gross income from his corn crop?
- a. \$527,550 c. \$390,000
b. \$223,000 d. \$434,500
- C 63. How much total income (gross income) is the farm expected to produce?
- a. \$706,000 c. \$741,000
b. \$467,000 d. \$787,250
- B 64. What are the total specified expenses for the farm?
- a. \$628,900 c. \$452,000
b. \$502,000 d. \$837,540
- D 65. What are the total net returns for the farm (total returns above total specified expenses)?
- a. \$332,700 c. \$137,320
b. \$234,000 d. \$239,000

E. LOAN AMORTIZATION SCHEDULE (15 points)

An agricultural producer finances a tractor for three years, with annual payments. The interest rate charged on the loan is 10 percent APR (annual percentage rate). After making a down payment, the principal financed is \$40,000, resulting in an annual payment of \$16,084.59. Complete the following loan amortization schedule by selecting the value that is missing in the table.

Year	Beginning Balance	Annual Payment	Interest Paid	Principal Repayment	Ending Balance
1	\$40,000.00	\$16,084.59	\$4,000.00	Question 81	\$27,915.41
2	\$27,915.41	\$16,084.59	Question 82	Question 83	\$14,622.36
3	Question 84	\$16,084.59	\$1,462.24	Question 85	\$0

- C 81. The principal repayment in year 1 is:
- a. \$6,250.29 c. \$12,084.59
b. \$10,245.67 d. \$14,211.35

- D 82. The interest paid in year 2 is:
- a. \$720.00 c. \$1,893.45
b. \$1,245.42 d. \$2,791.54

- A 83. The principal repayment in year 2 is:
- a. \$13,293.05 c. \$17,042.23
b. \$15,075.12 d. \$17,845.09

- B 84. The beginning balance in year 3 is:
- a. \$ 0 c. \$16,084.59
b. 14,622.36 d. \$27,915.41

- B 85. The principal repayment in year 3 is:
- a. \$ 0 c. \$16,084.59
b. 14,622.36 d. \$27,915.41

F. PRODUCTION RELATIONSHIP (15 Points)

The following data relate to the use of nitrogen in the production of corn. Please address the following relationships given the data below.

Input Level (Nitrogen)	Total Physical Product (Bushels of Corn)	Average Physical Product	Marginal Physical Product
0	0	–	–
1	18	18.00	18
2	32	16.00	14
3	40	13.33	8
4	47	11.75	7
5	50	10.00	3
6	52	8.67	2
7	53	7.57	1
8	53	6.62	0

- C 86. What is average product when 4 units of nitrogen are used?
a. 40.00 b. 18.22 c. 11.75 d. 20.11
- A 87. What is marginal product when 4 units of nitrogen are used?
a. 7 b. 9 c. 20 d. 25
- C 88. What is marginal product when 8 units of nitrogen are used?
a. 8 b. 27.50 c. 0 d. 42
- B 89. At what nitrogen input level does the rational production area begin (stage 2 of production)?
a. 0 b. 1 c. 2 d. 3
- D 90. What nitrogen input level defines the beginning of stage 3 of production?
a. 0 b. 4 c. 6 d. 8

H. NET WORTH STATEMENT (15 Points)

Please assist Mr. Mayeux in completing his current net worth statement. Assume that he has provided you with the following information and you are to estimate the statement for May 1, 2013.

Soybean inventory	\$ 25,000	Savings account	\$ 35,000
Cash value of life insurance	20,000	Machinery	225,000
Real estate	725,000	Accounts payable	17,000
Total machinery debt	125,000	Total land debt	275,000
Notes payable-Nov. 1, 2012	45,500	Unused crop supplies	6,500
Tractors	200,000	Property taxes	2,725

D 96. What is the total value of current assets?

- a. \$35,000
b. \$55,000
c. \$80,000
d. \$86,500

D 97. What is the total value of intermediate assets?

- a. \$100,000
b. \$200,000
c. \$225,000
d. \$425,000

B 98. What is the total value of long term assets?

- a. \$225,000
b. \$725,000
c. \$200,000
d. \$275,000

D 99. What is the value of total assets?

- a. \$355,000
b. \$380,000
c. \$960,500
d. \$1,236,500

D 100. What is the value of equity?

- a. \$242,500
b. \$540,275
c. \$650,250
d. \$771,275

Table 1. Estimated costs per acre, Roundup Ready Corn, Stale Seedbed, Irrigated, 8-row equipment, 38 inch, Alluvial Soil, Louisiana, 2011.

ITEM	PRICE \$/bu.	QUANTITY bu./ac.	AMOUNT \$/acre
INCOME			
Corn	6.50	150.0000	975.00

TOTAL INCOME			975.00

TOTAL DIRECT EXPENSES			510.00
RETURNS ABOVE DIRECT EXPENSES			465.00
TOTAL FIXED EXPENSES			88.00

TOTAL SPECIFIED EXPENSES			598.00
RETURNS ABOVE TOTAL SPECIFIED EXPENSES			377.00

Table 2. Estimated costs per acre, Roundup Ready Soybeans, Stale Seedbed, Irrigated, 8-row equipment, 38 inch, Alluvial Soil, Louisiana, 2011.

ITEM	PRICE \$/bu.	QUANTITY bu./ac.	AMOUNT \$/acre
INCOME			
Soybeans	13.00	45.0000	585.00

TOTAL INCOME			585.00

TOTAL DIRECT EXPENSES			360.00
RETURNS ABOVE DIRECT EXPENSES			225.00
TOTAL FIXED EXPENSES			78.00

TOTAL SPECIFIED EXPENSES			438.00
RETURNS ABOVE TOTAL SPECIFIED EXPENSES			147.00