

Part 1: Financial Statements (50 points)

Multiple Choice (2 points each)

1. The 1040 Schedule F is an example of which type of statement?
 - a. Net worth statement
 - b. Cash income statement**
 - c. Cash flow statement
 - d. Enterprise budget statement
2. An accounting period for the farm that runs from July 1 to June 30 is an example of what type of accounting period?
 - a. Accrual Accounting period
 - b. Cash accounting period
 - c. Calendar year accounting period
 - d. Fiscal year accounting period**
3. The expected returns and costs associated with a specific production activity.
 - a. Enterprise budget**
 - b. Farm Budget
 - c. Partial budget
 - d. Break-Even budget
4. Costs that change directly with the level of production
 - a. Input costs
 - b. Fixed costs
 - c. Variable costs**
 - d. Output costs
5. A balance sheet will list which items?
 - a. Inflows and outflows
 - b. Receipts and Expenses
 - c. Variable and Fixed Costs
 - d. Assets and Liabilities**
6. Which financial statement lists the cash and non-cash receipts and expenses of a farm during a specific time period?
 - a. Balance sheet
 - b. Cash flow statement
 - c. Income statement**
 - d. Enterprise Budget
7. A schedule of expected returns and costs
 - a. Budget**
 - b. Cash flow
 - c. Balance Sheet
 - d. Inflow

Matching: Match the Financial Measure with its Equation (2 points each)

- | | |
|--|--|
| 1. ___J___ Current Ratio | a. Depreciation expense/gross revenue |
| 2. ___C___ Working Capital | b. Total farm net worth/total farm assets |
| 3. ___E___ Debt to Asset Ratio | c. Total current farm assets minus total current liabilities |
| 4. ___J___ Debt to Equity Ratio | d. (Net farm income from operations+farm interest expense-value of operator and unpaid family labor)/average total farm assets |
| 5. ___A___ Depreciation expense ratio | e. Total farm liabilities/Total farm assets |
| 6. ___B___ Equity to Asset Ratio | f. Operating expense-depreciation/gross revenue |
| 7. ___D___ Rate of Return on Farm Assets | g. (Net farm income from operations -value of operator and unpaid family labor)/average total farm equity |
| 8. ___G___ Rate of Return on Farm equity | h. (Net farm income from operations+farm interest expense-value of operator and unpaid family labor)/gross revenue |
| 9. ___H___ Operating profit margin | i. Total current farm assets/Total current farm liabilities |
| 10. ___F___ Operating expense ratio | j. Total farm liabilities/total farm equity |

Short Answer: Round all answers to 2 decimal places: (2 Points each)

1. What was the net farm income for 2012? ___\$31,092_____
2. What was the net worth of the Stuff farm at the end of 2012?
___\$1,283,313_
3. Looking ahead in 2013, what amount is expected to be the lowest cash balance for the farm? ___\$7,169__

4. What percent of the farm's total debt is due in 2013?
 $152,929/406,929 = 37.58\%$ _____
5. Calculate the current ratio for the Stuff Farm. $201,042/152,929 = 1.31$ _____
6. Calculate the Debt to Equity ratio for the stuff farm. $406,929/1,283,313 = .32$ _____
7. Calculate the operating profit margin if the value of operator and unpaid family labor is \$10,000.
 $(31,092 + 72,000 - 10,000) / 666,312 = .14$ _____
8. Is the Stuff farm Liquid? (1 point) (Circle one) **Yes** No
9. Is the Stuff Farm Solvent? (1 point) (Circle one) **Yes** No

Part II: Cash Flow Planning (30 points)

A. Use the 2013 Projected Cash Flow pages to answer the following questions about the Stuffs projected cash flows. (2 points for each answer)

1. Which month has the largest positive cash position for the farm?

October

2. Which month has the largest negative cash position for the farm?

June

3. What is the cash difference for September?
(26,607)
-

4. Which receipt item generates the most inflows?
Feeder pigs
-

5. Which expense item is the greatest?
Purchased feed
-

6. Does the operation have a positive cash flow for the year? **Yes** No

7. How much money was spent on interest payments for the year?

72,000

8. Would the operation need to borrow more or less money at the end of the year?

Less

9. What are the total cash inflows for May?

1,154

10. What are the total cash outflows for February?

37,814

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B. Place an O in front of each item that should be included in a cash flow and an X for each item that should not be included in a cash flow. (1 point each)

11. O _____ Crop Sales
12. O _____ Principal payments
13. X _____ Operating loan balance
14. O _____ Livestock sale checks
15. X _____ The value of crops exchanged for services
16. X _____ Depreciation
17. X _____ Inventory changes
18. X _____ Accounts payable
19. O _____ Insurance payments
20. X _____ Opportunity cost

Part III: Marketing and Economic Principles (40 points)

A. Matching: Match the term with the correct definition (2 points each)

1. ___C___ Basis	a. An upward trend in market prices
2. ___K___ Bear Market	b. One who sells a futures contract to protect against price fluctuations
3. ___A___ Bull Market	c. Difference in futures price and local price
4. ___E___ Call Option	d. Funds deposited with a broker to trade futures contracts
5. ___G___ Demand	e. The right to buy a futures contract at a specific price
6. ___H___ Futures Contract	f. The right to sell a futures contract at a specific price.
7. ___B___ Hedger	g. The quantity of a good which consumers are willing to purchase at alternative prices in a given period of time.
8. ___C___ Margin	h. An agreement to buy or sell a commodity at a future date and place.
9. ___F___ Put Option	i. The amount of commodities that would be sold at a series of prices during a specific time period.
10. ___J___ Speculator	j. A person who attempts to anticipate price changes through market activities to make a profit.
11. ___I___ Supply	k. A downward trend in market prices

B. Multiple Choice: (2 points each)

12. The Stuffs have agreed to sell 2,000 bushels of corn this October to a local farm at a price of \$6.30. This is an example of

- a. Speculating
- b. A put option
- c. A forward contract**
- d. Hedging

13. What is the main reason for using futures contracts for hedging?

- a. To decrease depreciation costs
- b. To improve inventory levels
- c. To decrease risks**
- d. To improve cash flow

14. The law of demand reveals consumers will take more at lower prices, meaning that the slope of the demand curve will be what?
- a. positive
 - b. negative**
 - c. 0
 - d. undefined
15. What is determined by the point where supply and demand meet?
- a. Price**
 - b. The market floor
 - c. Utility
 - d. Basis
16. If the supply of a commodity increases and all other factors remain constant, what is likely to happen to the price of that commodity?
- a. Decrease**
 - b. Increase
 - c. No change
 - d. Not enough information given
17. If the demand for a commodity drops due to cheaper complementary products and all other factors remain constant, what is likely to happen to the price?
- a. Decrease**
 - b. Increase
 - c. No change
 - d. Not enough information given
18. What word is defined as all of the economic activities involved in preparing and positioning the product for the final consumer?
- a. Selling
 - b. Producing
 - c. Marketing**
 - d. Consuming
19. The usefulness of a commodity as measured by its ability to satisfy human wants and needs.
- a. Utility**
 - b. Margin
 - c. Basis
 - d. Elasticity
20. The price at which options are purchased or sold.
- a. margin
 - b. strike price**
 - c. basis
 - d. equilibrium

Part IV: Investment Analysis. (52 points)

A. Amortization schedule

The Stuffs want to purchase a newer combine to upgrade their older one. The purchase price is \$150,000. They plan to trade in an older model for \$20,000. The can obtain a loan at 6.0% interest for 7 years. The payments will be due annually in equal payments of \$23,287.55. Complete the amortization table below. Round all answers to the nearest cent. (Two points per answer)

Payment number	Annual Payment amount	Interest payment	Principal payment	Loan Balance
0	0	0.00	0.00	130,000.00
1	23,287.55	7800	15487.55	114512.45
2	23,287.55	6870.75	16416.80	98095.65
3	23,287.55	5885.74	17401.81	80693.84
4	23,287.55	4841.63	18445.92	62247.92
5	23,287.55	3734.87	19552.68	42695.24
6	23,287.55	2561.71	20725.84	21969.40
7	23,287.56	1318.16	21969.40	0.00

B. (2 points each)

1. What is the total interest paid? _\$33,012.86_

2. What percentage of the total amount paid is interest expense

$33,012.86/163,012.86= 20.25\%$

3. Which payment schedule would cause you to pay the most interest?

- a. Bi-monthly
- b. Monthly
- c. Quarterly
- d. Semi annual
- e. Annual**

4. It is generally recommended that the term of a loan be greater than the useful life of the asset.

True False

5. The Stuff's obtained a \$10,000 operating loan for 6 months. The loan had an APR of 7 percent. How much money did they have to pay back in interest and principal?

 \$10350

C. Match the term with the definition. (2 points each)

1. <u> C </u> Accrued interest	a. Product of the principal, time in years, and annual rate of interest
2. <u> E </u> Amortization	b. An amount of money borrowed, invested, or used on which interest accrues
3. <u> I </u> Compounding	c. Interest owed, but not yet paid
4. <u> G </u> Credit	d. Percent charged on principal For the use of money. Also called Annual Percentage Rate
5. <u> H </u> Debt	e. The repayment of a loan and the interest due with a series of equal payments over a specified time.
6. <u> F </u> Discounting	f. A calculation used to determine the current or present value of a cost or receipt in the future.
7. <u> J </u> Interest	g. An addition to revenue, net worth, or an account
8. <u> D </u> Interest Rate	h. An obligation to pay in the future
9. <u> B </u> Principal	i. Interest received from an investment is added to the principal and interest is paid again on the total sum.
10. <u> A </u> Simple Interest	j. The rental charge for the use of principal. The expense of borrowing money.

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D. Refer to the Financial Coefficient table to answer the questions.
(3 points each.)

1. What would the value be for \$12,000 invested at 6.0% with compounding interest for 21 years? _____\$40,752_____

2. If the Stuffs were looking at a \$20,000 equipment loan amortized for 7 years with an interest rate of 8%, what would their annual payment be?

\$3842

V. Budgeting (28 Points)

1. The Stuffs are considering switching acreage from wheat to corn production to meet their forage needs. Use the Wheat Enterprise Budget and the Corn Enterprise Budget to complete the partial budget on a per acre basis. (Each answer is 3 points)

Additional Costs: Corn operating costs 686.70 Corn Fixed costs 47.26 Subtotal=733.96	Additional Returns: Corn grain 843.60 Subtotal= 843.60
Reduced Returns: Wheat 690 Subtotal= 690	Reduced Costs: Wheat operating costs 346.84 Wheat fixed costs 193.66 Subtotal= 540.50
Total AC+RR=1423.96	Total AR+RC=1384.10
Net Change in income: (39.86)	

2. Should the Stuffs switch more production to Corn? (1 point)

Yes **No**

3. What breakeven yield would be needed for Corn to make the returns above all specified costs equal that for wheat? (3 Points)

$$5.7Y - 733.96 = 149.5 \quad Y = 154.99 \text{ Bu}$$

4. What breakeven price for corn is needed to equal returns above all specified costs for wheat? (3 points)

$$148P - 733.96 = 149.5 \quad P = \$5.97$$

Part VI: Economic Principals (36 points)

A. Production Function: The chart below represents data to help the Stuffs decide how many seeds they need to plant to maximize yields. (3 points each)

Variable Input	Total Production	Average Production	Marginal Production
0	0	0	0
1	25	25	25
2	49	24.5	24
3	72	24	23
4	88	22	16
5	100	20	12
6	102	17	2
7	90	12.86	-12
8	80	10	-10

1. The Stuffs should never use more than 6 units of variable input. (2 points)
2. The addition of more input beyond 8 units will cause what to happen to total productivity? (2 points)
 - a. Increase
 - b. Decrease**
 - c. No Effect
 - d. Stay the same
3. What does marginal cost measure? (2 points)
 - a. The change in cost by adding another unit of output
 - b. The profitability of a product
 - c. The output cost from production of one unit of input
 - d. The change in total cost from adding another unit of input.**

Part VII. Risk Management (34 points)

A. Match the term to its description. (2 points each)

1. ___B___ Insurance	a. The act of managing or controlling exposure to risk in order to meet preset objectives
2. ___D___ Insurance Premium	b. Economic device whereby an individual or firm substitutes a certain cost for an uncertain financial loss
3. ___C___ Risk	c. Unexpected circumstances where the probability of an event occurring can be empirically determined.
4. ___A___ Risk Management	d. The payment to an insurance company by a policyholder to purchase and maintain an insurance policy
5. ___E___ Uncertainty	e. Where the probability of an event occurring cannot be empirically determined.

B. Multiple Choice: Circle the correct answer. (2 points each)

1. In a set of data, which of the following refers to a number that occurs the most frequently?
 - a. Average
 - b. Mean
 - c. Median
 - d. Mode**
2. Prices of grain crops tend to move together in the same direction. What is the statistical term for this?
 - a. Median
 - b. Correlation**
 - c. Variance
 - d. Deviation

3. Planting a variety of crops as opposed to one or two utilizes which risk management strategy?

a. Diversification

b. Minimization

c. Specialization

d. Utilization

C. Use the enterprise budgets to consider the following questions to determine the Stuff's risks associated with their operation. (3 points each) (Round all answers to the nearest cent or to two decimal places.)

1. A 5% change in which cost item would create the largest percentage change in total production costs? Feed

2. What is the breakeven price for market hogs to cover total costs?

$$\underline{P * 260 = 182.02 \quad P = \$70.01}$$

3. If the fertilizer and equipment costs for wheat increase by 20%, what would the impact be on returns above all specified costs? They would drop by \$43.29 to \$106.21

4. What is the breakeven yield needed for soybeans to meet total operating costs? $11.60 * Y = 293.47$ $Y = 25.30$ Bu/ Acre

5. If the soybean yield is 57 bushels per acre, each one cent increase in the price of soybeans will provide what amount to net return above operating costs? $\$.57/\text{Acre}$

6. What price per bushel of soybeans is needed to provide the same returns above all specified costs as corn? $57 * P - 293.47 - 244.22 = 109.64$

$$P = \underline{\$11.36}$$

Part VIII. Business Organization (30 points)

Matching: Place the letter of the business organization next to the correct description. You may use each multiple times. Some questions may have more than one correct answer, but you only need to list one. (2 points each)

- A. Cooperative
- B. Corporation
- C. Partnership
- D. Sole proprietorship

1. D The easiest to change by expanding or contracting.
2. C Uses pooled resources from two or more individuals.
3. B Owned by the stockholders
4. A/B The owners have limited liability.
5. C/D The owners have unlimited liability.
6. A Owned and controlled by member patrons
7. C/D The business may end with the death of the owner
8. B The business is costly to start and maintain
9. D Raising capital for purchases will be more difficult
10. C Profits and losses are divided based on a specific agreement
11. D The owner receives all profits and losses
12. B The stockholders receive dividends
13. A Patronage refunds are given based on the level of business
14. A Each member receives one vote
15. B Management and ownership can be separated