

Economics 330
Spring 2008
Exam 2
March 7, 2008

Name Key

Section: 8:00 or 9:00 (circle one)

PART I. Multiple Choice. Indicate the best answer. (3 pts. ea.)

1. Reasons why you would replace machinery would include:
 - a. It is too small.
 - b. It is worn out and not dependable.
 - c. It is obsolete.
 - d. Costs such as repairs for the present machine are increasing.
 - e. All of the above.
2. Methods for acquiring machinery would include:
 - a. Purchase or buy.
 - b. Lease.
 - c. Joint ownership.
 - d. Custom hire.
 - e. All of the above are methods.
3. Budgets are a common tool used in analyzing farm alternatives or decisions. Examples of budgets could include:
 - a. A partial budget.
 - b. A whole farm budget.
 - c. A crop budget such as soybeans.
 - d. A livestock budget such as cattle feeding.
 - e. All of the above are types of budgets.
4. In a partial budget:
 - a. You only evaluate the costs and returns for the items that are changing.
 - b. You evaluate all costs and all revenues for the entire operation.
 - c. You only evaluate the fixed costs for the operation.
 - d. You only compare the return for the items that are changing.
 - e. You evaluate the revenue for the entire operation.
5. Reasons for keeping farm records would include:
 - a. Provides information for business analysis.
 - b. Can assist in obtaining loans.
 - c. Can be used to help prepare tax returns.
 - d. Can be used to assess the progress of your business over time.
 - e. All of the above are reasons for keeping records.

6. Which of the following is an example of a fixed (long term) asset?
- Breeding livestock value.
 - Feed in storage.
 - Land loan which is not due in the next 12 months.
 - The value of land.
 - c and d above.
7. The degree to which a business' total assets adequately cover or exceed the total liabilities is referred to as:
- Bankruptcy
 - Solvency
 - Profitability
 - Net worth
 - Liquidity
8. When evaluating the liquidity of a farm business which is applying for a loan, a lender would be most likely to look at the farms:
- Current assets and current liabilities
 - Net farm income from operations
 - Cost value net worth
 - Market value net worth
 - Total assets and total liabilities
9. Which of the following is an example of a current asset?
- Breeding livestock value
 - Value of market livestock
 - Loan on farm machinery you will pay this year
 - Account payable
 - B and c above
10. If a business has a debt-asset ratio which is greater than 1.5:
- It is in good financial shape for the long term
 - It is not solvent; it is bankrupt
 - The short-term financial picture looks good
 - The net farm income from operations was at a very low level last year
 - None of the above apply.
11. Which of the following best describes a 'particular' balance sheet?
- It shows changes in profit from assets used in the business
 - It shows the assets and liabilities over the last accounting period
 - It shows assets and liabilities at a point in time
 - It shows business profit for the last accounting period
 - None of the above.

The next six questions are based on the following information.

You are looking into purchasing a combine for your farm business. You have pulled together the following information for a combine purchase and want to calculate costs

Purchase price	=	\$180,000
Salvage value	=	\$30,000
Years of useful life	=	6 years
Fuel cost	=	\$3.00/gallon
Fuel use (gal./hr)	=	12
Taxes	=	1% of new cost
Labor cost	=	\$15.00/hr
Labor amount (use)	=	1,000 hours (per year)
Repairs	=	10% of new cost
Number of acres	=	1500 acres
Interest rate	=	8%
Insurance and housing	=	3%

12. In a budget for combine ownership, what is the annual interest cost? (Use purchase price and salvage value.)
- a. \$14,400
 b. \$12,000
 c. \$16,800
 d. \$8,400
 e. None of the above.
13. In a budget for combine ownership, what is the annual depreciation? (Use straight line as you did in Lab 5).
- a. \$30,000
 b. \$22,000
 c. \$25,000
 d. \$35,000
 e. None of the above.
14. In a budget for combine ownership, what is the annual level of taxes?
- a. \$1,800
 b. \$1,500
 c. \$2,100
 d. \$2,000
 e. None of the above.
15. What is the level of fuel cost per acre? (As indicated, you will use the combine on 1500 acres.)
- a. \$11.25
 b. \$24.00
 c. \$36.00
 d. \$37.50
 e. None of the above.
16. In a budget for combine operating cost, what is the annual repair cost per acre?
- a. \$18.00
 b. \$12.00
 c. \$13.75
 d. \$9.50
 e. None of the above.

17. If you use the combine for 1,000 acres rather than the 1500 acres, what happens to your fixed cost per acre?
- a. Remains unchanged.
 - b. Decreases.
 - c. Increases.
 - d. None of the above.

The following four questions are based on the attached "farrow-to-finish" budget.

18. How many bushels of corn are fed per litter of pigs produced?
- a. 973 bushels
 - b. 97 bushels
 - c. 95 bushels
 - d. 210 bushels
 - e. None of the above.
19. What is the labor value per hour that is reflected in the budget?
- a. \$12.00 per hour
 - b. \$12.50 per hour
 - c. \$15.00 per hour
 - d. \$10.50 per hour
 - e. None of the above.
20. If the market hog price is \$40.00 per hundred pounds what is the income over variable costs which would be reflected in the budget? All other information is as reflected in the budget.
- a. \$828.88
 - b. \$109.76
 - c. \$53.54
 - d. \$18.54
 - e. None of the above.
21. What is the breakeven selling price for market hogs needed to cover all costs? All information is as provided in the budget.
- a. \$121.68
 - b. \$46.80
 - c. \$37.42
 - d. \$45.11
 - e. None of the above.

The next three questions are based on the following information for Cy's Balance Sheet.

Fixed liabilities	\$200,000
Current liability	\$80,000
Intermediate liability	\$100,000
Total liabilities	\$380,000
Fixed assets	\$300,000
Current assets	\$60,000
Intermediate assets	\$150,000

22. What is Cy's current ratio? (As calculated for Cy Acres in class and in the text.)
- a. .75
 - b. 2.0
 - c. 1.5
 - d. 1.33
 - e. None of the above.
23. What is Cy's debt-to-asset ratio?
- a. .745
 - b. .50
 - c. 1.342
 - d. .469
 - e. None of the above
24. What is the level of Cy's net worth?
- a. \$380,000
 - b. \$130,000
 - c. \$300,000
 - d. Cannot be calculated with information provided
 - e. None of the above.

The following information is used for the next two questions.

You have the option of purchasing a self-propelled combine or having your neighbors, Joyce and her daughter Heather, custom harvest your crop. They will custom harvest the crop for \$35.00 per acre. The purchase cost of the combine is \$200,000. Given this, you calculate the annual fixed ownership cost to be \$20,000 per year. Your operating cost per acre is \$20.00 while your fixed cost per acre is calculated to be \$40.00.

25. Given this, how many acres are needed before you can justify ownership? (Don't consider any factors such as potential yield differences, etc.)
- a. At least 1,000 acres
 - b. At least 2,000 acres
 - c. At least 1,333.33 acres
 - d. At least 800 acres
 - e. None of the above.

26. With further calculation, you conclude that if you have Joyce and Heather custom combine your soybean crop they will have a combine with more current harvesting technology. However, you are paying them so much per acre so they travel at a rapid speed for harvesting. As a result, you get one bushel less of soybeans per acre. You project that the soybean price will be \$10.00 per bushel. Given this, what is the breakeven number of acres? (With this calculation, assume that the annual fixed ownership cost is \$20,000 per year; the custom rate per acre is \$35.00, the operating cost is \$15.00 per acre, and the fixed cost per acre is \$40.00.)
- At least 1,000 acres
 - At least 666.67 acres
 - At least 2,000 acres
 - You will never buy the combine as custom harvesting will always be cheaper.
 - None of the above.
27. Jim Farrell, a guest speaker, is:
- President of Farmers Hybrid Company.
 - President of Farmers American Loan Inc.
 - President of Farmers National Company.
 - President of the Farmers Dividend Company.
28. Jim Farrell talked about changes he saw in the next generation of land owners who represent the baby boomers. He felt:
- They will be more thrifty as opposed to spending more.
 - They are very society or social good focused as compared to 'me' focused.
 - They will have more ag experience.
 - They will be less likely to borrow money.
 - None of the above.

The next five questions are based on the following information:

You have been provided the following information from '330 Acres' and asked to provide assistance on the analysis.

Capital charge (opportunity cost)	10%
Net farm income from operations	\$70,000
Interest expense	\$20,000
Unpaid labor charge	\$25,000
Unpaid management charge	\$15,000
Average asset value	\$600,000
Average level of liabilities	\$200,000

29. What is '330 Acres' return to assets?
- \$90,000
 - \$60,000
 - \$30,000
 - \$50,000
 - None of the above.

30. If "330 Acres" return to equity was \$20,000 (not the correct answer), what is her rate of return on equity (ROE)?
- 50.00%
 - 10.00%
 - 5.00%
 - 3.33%
 - None of the above.
31. What is '330 Acres' return to labor?
- \$15,000
 - \$30,000
 - \$55,000
 - \$6,000
 - None of the above.
32. What is '330 Acres' return to equity?
- \$30,000
 - \$40,000
 - \$55,000
 - \$25,000
 - None of the above.
33. During Spring Break, which is a week away:
- You are going to get some time to yourself fully charged and come back ready to go to finish off the semester full of energy.
 - You are going to do some fun things.
 - You are going to do something that you enjoy.
 - HINT:** "You are going to do all of the above" is the best answer.
 - You are going to do all the above.

Part II. Bonus (2 pts.)

What is the name of the person that sits next to you (closest to you) in this class (on most days)?

The Old Sage Says:

- A smile is a gently curved line that sets a lot of things straight.
- Well done is better than well said.
- Calculating business analysis ratios is a lot like twirling a baton, turning handsprings or eating with chopsticks. It looks easy until you try it.