

Econ 330
Fall 2007
Exam 2

Name _____

Part I: Multiple Choice. Circle the best answer (4 points each).

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 - c. it is obsolete.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 the above are reasons.

2. Methods for acquiring machinery use 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. an enterprise budget such as soybeans.
 - d. a cash flow budget.
 - e. All of the above are types of budgets.

4. In a partial budget:
 - a. you only evaluate the costs and return 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. The degree to which a business' current assets adequately cover or exceed the current liabilities is referred to as:
 - a. bankruptcy
 - b. solvency
 - c. profitability
 - d. net worth
 - e. liquidity
 - f. None of the above.

6. Which of the following is an example of a current liability for you?
 - a. Total liability on a 20 year farm loan.
 - b. Total liability on a 6 year building loan.
 - c. Value of land.
 - d. The money your neighbor owes you for a 4-H steer she purchased.
 - e. None of the above.

7. Which of the following would appear on a particular balance sheet?
- Interest payments for land purchases.
 - The value of hogs that have been sold out of inventory.
 - The principal payment you made on the machinery loan.
 - The value of sheep you sold.
 - The value of livestock you have in inventory.

The following six questions are based on the attached corn silage budget.

8. Attached is an example budget for corn silage production. What is the nitrogen cost per pound (lb) used in the budget?
- \$35.00
 - \$.13
 - \$.25
 - \$.15
 - None of the above.
9. Given the attached corn silage budget, if you had larger machinery and you used 4 hours rather than 5.0 hours of labor per acre, what would your labor cost on the budget be?
- \$47.50
 - \$38.00
 - Would not change because it is not a fixed cost.
 - \$24.00
 - None of the above
10. Given the attached corn silage budget, if the price of corn silage is \$30.00 per ton, what is the level of income over variable costs (gross margin) for an acre of corn silage? (Assume all costs are as provided in the budget.)
- \$246.16
 - \$9.50
 - \$213.35
 - \$16.64
 - None of the above.
11. Given the attached corn silage budget, what is the fixed cost of producing an acre of corn silage? (Assume all costs are as provided in the budget.)
- \$440.50
 - \$236.65
 - \$203.84
 - \$320.96
 - None of the above.
12. For the attached budget, how low can the price of corn silage go in the short run before you would decide not to grow corn silage and to let the land sit idle? (Assume you have no other use for the land. You either produce corn silage or let it idle.)
- \$13.58 or less per ton
 - \$15.77 or less per ton
 - \$29.37 or less per ton
 - \$25.47 or less per ton

13. What is the break-even price for corn silage?
- \$13.58 per ton
 - \$15.77 per ton
 - \$25.47 per ton
 - \$29.37 per ton
 - None of the above.

The following six questions are based on the attached **Finishing Steer Calves budget**.

14. Given the attached Finishing Steer Calves budget, what is the income (gross revenue) per animal placed on feed if the death loss is 2 percent and the market steer price is \$.80 per pound?
- \$920
 - \$901.60
 - \$892.40
 - \$100.00
 - None of the above.
15. For the Finishing Steer Calves budget, the corn fed (61 bushels) was:
- purchased at the elevator for \$2.40 per bushel
 - grown on the farm
 - purchase from a neighbor for 2.40 per bushel
 - a or c above
16. How much alfalfa-brome hay is fed per steer?
- .65 tons
 - 75 pounds
 - 116 pounds
 - 61 bushels
 - None of the above.
17. For the Finishing Steer Calves budget, if the market cattle price is \$.85 per pound, what is the income over variable costs (gross margin) per steer calf? All other information is as shown in the budget.
- \$367.55
 - \$365.45
 - \$155.51
 - \$134.51
 - None of the above.
18. The labor cost of \$9.00 per hour as reflected on the Finishing Steer Calf budget is an example of:
- using opportunity cost to place a value on resources
 - non-farm costs
 - family living costs
 - fixed costs
 - None of the above.

19. If the feeder steer reflected on the Finishing Steer Calves budget was on feed for 8 months rather than the 230 days, what would be the interest on the feeder steer purchase price if the rate is 7%? (The purchase price remains at \$522.50)
- \$36.58 to \$36.60
 - \$24.38 to \$24.40
 - \$3.04 to \$3.06
 - None of the above.
 - Can't determine with information provided.

The next seven 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	=	\$150,000
Salvage value	=	\$40,000
Years of useful life	=	5 years
Fuel cost	=	\$3.00/gallon
Fuel use (gallon/hour)=		6.0
Taxes	=	1% of new cost
Labor cost	=	\$10.00/hour
Labor amount (use)	=	1,000 hours
Repairs	=	10% of new cost
Number of acres	=	800 acres
Interest rate	=	10%
Insurance and housing=		4% of new cost

20. In a budget for combine ownership, what is the annual interest cost?
- \$15,000
 - \$11,000
 - \$9,500
 - \$4,000
 - None of the above.
21. In a budget for combine ownership, what is the annual depreciation? (Use straight line as you did in the Lab)
- \$30,000
 - \$22,000
 - \$19,000
 - \$38,000
 - None of the above.
22. In a budget for combine ownership, what is the annual level of taxes?
- \$1,000
 - \$1,100
 - \$950
 - \$1,500
 - None of the above.

23. What is the level of fuel cost per acre? (As indicated, you will use the combine on 800 acres.)
- \$22.50
 - \$21.00
 - \$19.50
 - \$13.00
 - None of the above.
24. In a budget for combine operating cost, what is the labor cost?
- \$9,500
 - \$10,000
 - \$11,000
 - \$15,000
 - None of the above.
25. If you use the combine for 1,000 acres rather than the 800 acres, what happens to your fixed cost per acre?
- Remains unchanged.
 - Decreases.
 - Increases.
 - 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 \$25.00 per acre. The purchase cost of the combine is \$150,000. Given this, you calculate the annual fixed ownership cost to be \$18,000 per year. Your operating cost per acre is \$7.00 per acre while your fixed cost per acre is calculated to be \$38.00 per acre.

26. Given this, how many acres are needed before you can justify ownership? (Don't consider any factors such as potential yield differences, etc.)
- At least 1,000 acres
 - At least 720 acres
 - At least 580.65 acres
 - At least 1384.6 acres
 - None of the above.
27. 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 \$7.00 per bushel. Given this, what is the break even number of acres? (However, with this calculation, assume that the annual fixed ownership cost is \$15,000 per year; the custom rate per acre is \$25.00, the operating cost is \$10.00 per acre, and the fixed cost per acre is \$35.00.)
- At least 1,000 acres
 - At least 1,875 acres
 - At least 681.82 acres
 - At least 468.75 acres
 - None of the above.

The next four questions (28-31) are based on the information for the 330 Acres Accrued Income Statement and Financial Analysis Data which is provided.

28. What is the debt-to-asset (debt/asset) ratio for 330 Acres?
- 4.56
 - .219
 - .781
 - .692
 - None of the above
29. What is the working capital for 330 Acres:
- \$320,631
 - \$111,222
 - \$66,169
 - \$533,391
 - \$267,901
 - None of the above
30. What is the current ratio for 330 Acres? (As calculated in the text.)
- 4.56
 - 2.838
 - 1.44
 - 1.28
 - None of the above.
31. Is 330 Acres operation solvent?
- Yes
 - No
 - Can't determine with the information provided.

The next two questions (24-26) are based on the following information. Your neighbor "Hawkeye Hotfeet" has purchased a tractor for his crop operation. He heard that you were in Econ 330 and that depreciation methods had been discussed. Being a "Hawkeye" he had never heard of depreciation or any other business thing. Moreover, he didn't know the Cyclones beat the Hawkeye football team. He was wondering how much depreciation he would calculate for his business records. He gave the following information on the tractor.

Purchase price	\$80,000
Years of useful life	5 years
Salvage value	\$35,000
Purchase date	January 1

32. What is the amount of depreciation "Hawkeye Hotfeet" would claim in the third year using the straight line method of depreciation?
- \$9,000
 - \$4,500
 - \$16,000
 - There is not any depreciation remaining for year 6.
 - None of the above.

33. What is the amount of declining balance depreciation "Hawkeye Hotfeet" would claim in the second year using the double declining balance method of depreciation?
- a. \$32,000
 - b. \$13,000
 - c. \$15,000
 - d. \$40,000
 - e. None of the above.

Bonus (3 points)

What is the name of the person sitting closest to you in this class?
