

Advanced Farm Business Management

Economics 430

Exam 1

October 28, 2008

Name _____

Key

Part I. Multiple choice (4 pts ea). Select the best answer.

1. Reasons for keeping farm records would include:
 - a. farm business analysis
 - b. basis for farm planning
 - c. means of controlling financial affairs
 - d. all of the above

2. Which of the following can you get from a properly prepared profit and loss statement that reflects the farm business?
 - a. a measure of crops in inventory at the beginning of the year
 - b. a measure of business debt
 - c. your increase in net worth
 - d. the change in non-farm income
 - e. all of the above
 - f. none of the above

3. For farm business analysis (management appraisal) purposes, not accounting for deferred liabilities will:
 - a. cause rate earned on equity (ROE) to be overstated
 - b. reduce your assets because asset values are lower
 - c. will not impact your rate earned on assets (ROA)
 - d. cause long term assets to be understated
 - e. overstate the level of equity
 - f. a and d above

4. Examples of accounting principles for business analysis include:
 - a. objectivity, minimize taxes, evaluate inventory at conservative values
 - b. consistency, always use the cash method, minimize taxes
 - c. materiality, consistency, tax consistency
 - d. conservative, objectivity, disclosure
 - e. consistency, soundness, disclosure
 - f. none of the above

5. Which of the following can you get from a properly prepared balance sheet?
 - a. the value of current assets you sold this year
 - b. a measure of interest paid this year
 - c. the level of new capital investment this year
 - d. the level of farm income
 - e. a measure of corn fed to livestock this year
 - f. none of the above

6. In strategic planning, examples of internal scanning would include:
- a. physical assets, the economy, history
 - b. the industry, the economy, culture
 - c. the competition, financial structure, economic performance
 - d. management skills of operator, decision-making structure, physical assets
 - e. all of the above are part of internal scanning
 - f. none of the above
7. Three types of farm business analysis include:
- a. with other farms, with farm plan, over time within the farm
 - b. with other farms, with your neighbors' goals, with farm plan
 - c. with farm plan, over time within the farm, with non-similar farms
 - d. none of the above

The following information is for the next four questions.

You have been provided the following information for Econ 430 Farm:

2008 Actual Soybean Price	=	\$10.00
2008 Actual Soybean Yield	=	45 bushels
Expected Soybean Yield	=	50 bushels
Expected Soybean Price	=	\$12.00

8. If you cash rent Econ 430 Farm for \$220 per acre and have total soybean production costs (including cash rent) of \$400 per acre, what is your level of return above production costs for your 2008 soybeans?
- a. \$100.00 per acre
 - b. \$50.00 per acre
 - c. \$200.00 per acre
 - d. \$75.00/acre
 - e. \$140.00/acre
9. If your rental arrangement for Econ 430 Farm was a flexible lease where the base is \$200 per acre rent and it varies depending on the relationship between actual and expected soybean yield and price. Thus, the actual rent paid is \$200.00 adjusted for the actual and expected soybean yield relationship and the actual and expected soybean price relationship. Given this the rent per acre would be:
- a. \$140.41/acre
 - b. \$150.00/acre
 - c. \$266.67/acre
 - d. \$216.00/acre
 - e. Can't calculate with information provided.
 - f. none of the above
10. If you have a 40 percent tenant and 60 percent landlord type of crop share lease for Econ 430 Farm, how many bushels will you receive as a tenant for the 2008 soybean crop?
- a. 27 bushels per acre
 - b. 22.5 bushels per acre
 - c. 20.0 bushels per acre
 - d. 30.0 bushels per acre
 - e. none of the above

11. If your rental agreement specifies that your payment for Econ 430 Farm is 25 percent of the gross crop value, what is your rent payment per acre?
- a. \$112.50/acre
 - b. \$100.00/acre
 - c. \$150.00/acre
 - d. \$225.00/acre
 - e. none of the above

The following five questions are based on the attached soybean budget shown as file A1-20, pg 6.

12. If you crop share the land on a 50-50 arrangement, what is the tenant's production costs? The costs are shared like a typical 50-50 crop share arrangement. Additional information for clarity is as follows: crop insurance, miscellaneous, and interest on preharvest variable costs are shared similar to seed and fertilizer costs. Lime is 100 percent landlord. The tenant will pay all grain hauling and handling costs. Given this, what are your production costs?
- a. \$163.17
 - b. \$104.68
 - c. \$101.89
 - d. \$142.45
 - e. none of the above
13. If the soybean price is \$10.00 per bushel, what is the gross (total) revenue per acre for the tenant?
- a. 101.06
 - b. 450.00
 - c. 225.00
 - d. 156.25
 - e. none of the above
14. How much potash was applied per acre of soybeans?
- a. 35 pounds
 - b. 60 pounds
 - c. 49 pounds
 - d. Can't determine with information provided.
 - e. none of the above
15. What is the break-even price per bushel of soybeans to cover all production costs as reflected in the budget. Evaluate this question as though you own the land.
- a. \$6.49 per bushel
 - b. \$6.33 per bushel
 - c. \$2.21 per bushel
 - d. \$4.11 per bushel
 - e. none of the above

16. In strategic planning, examples of external scanning would include:
- a. Physical assets, the economy, history
 - b. The industry, the economy, competition
 - c. The competition, financial structure, economic performance
 - d. Management skills of operator, decision-making structure, physical assets
 - e. All of the above are part of external scanning
 - f. None of the above

The next three questions are based on an attached graph which shows the season price index for market hogs (Iowa-S. Minn).

17. Today (October 28) you are evaluating if you will place feeder pigs on feed. They will be ready for market in four months (February). The average market price for market hogs in Iowa-Southern Minnesota this October (2008) has been \$40.00 per hundred pounds. Given this, what do you expect the market hog price (Iowa-Southern Minnesota) to be in four months (Feb 2009)?
- a. \$40.00
 - b. \$39.60
 - c. \$40.41
 - d. \$39.20
 - e. \$42.16
 - f. none of the above
18. Given the marketing month for the previous question (Feb 2008) and a market price of \$42.00 for market hogs in October 2008, what price range (or window) would you expect the price to be 95 percent of the time for February 2008?
- a. \$38.14 to \$46.71
 - b. \$33.86 to \$51.00
 - c. \$40.25 to \$48.75
 - d. \$36.95 to \$47.60
 - e. none of the above
19. Of the months provided below, which one has the highest relative level of price risk?
- a. May
 - b. September
 - c. March
 - d. April
 - e. June

The following three questions are based on an attached budget which shows the projected costs and returns from producing farrow-to-finish market pigs. It is page 3 of file B1-21 of your packet of information.

20. Given the budget information how many market pigs will you sell per litter? Base your calculation assuming you sell all pigs and you will purchase your replacement gilts.
- a. 8.8 pigs
 - b. 7.8 pigs
 - c. 8.2 pigs
 - d. 6.8 pigs
 - e. none of the above

21. If the price of supplement and minerals is \$.10 per pound and the corn price is \$3.00 per bushel, what is your total cash production cost per litter of pigs? (You purchase all your corn.)
- a. \$156.87
 - b. \$320.95
 - c. \$597.56
 - d. \$621.87
 - e. none of the above
22. If you are selling 8 pigs (250 pounds each) per litter and the cull sow value is \$50 per litter and the production cost is \$700 per litter, what is your breakeven selling costs per hundred pounds to cover all costs?
- a. \$45.00
 - b. \$35.00
 - c. \$32.50
 - d. \$52.50
 - e. none of the above
23. You are looking at placing some cattle on feed next week. They will be ready for market the last half of June 2008. You check and the August futures price is \$88.00 per hundred pounds. Given this, what is the expected interior Iowa-Southern Minnesota price? (Attached information may be useful in answering this question).
- a. \$88.58
 - b. \$88.00
 - c. \$86.50
 - d. \$87.42
 - e. none of the above

The next four questions are based on the attached crop share lease for 'Big Jim's Cyclone Farm'.

24. Based on the information as provided, how should the crop be shared to be equitable?
- a. a 50-50 crop share
 - b. a 40-60 (40% tenant – 60% landlord) crop share
 - c. a 60-40 (60% tenant – 40% landlord) crop share
 - d. none of the above
25. With the information as presented, what is the breakeven corn price per bushel for the tenant given the arrangement in the lease?
- a. \$3.42
 - b. \$2.32
 - c. \$2.87
 - d. \$2.15
 - e. none of the above

26. If the land charge was increased by 1 percentage point, from 6 percent to 7 percent, how much would the land charge increase?
- a. by \$30.00 per acre
 - b. by \$60.00 per acre
 - c. by \$15.00 per acre
 - d. by \$10.50 per acre
 - e. It would not change.
 - f. Can't calculate with the information provided.
27. With the information as presented, what is the level of profit or loss per acre for the tenant?
- a. profit of \$22.27
 - b. loss of \$52.90
 - c. profit of \$30.04
 - d. loss of \$22.27
 - e. none of the above

Attached you will find a cash flow budget and supporting information for I.M. Coasting for the year 2008. It is used for the next ten questions. There are five pages for I.M. Coasting.

28. With the information provided, what is the projected beginning cash balance for January 2008 for I.M.?
- a. \$500
 - b. \$1,254
 - c. \$434
 - d. \$18,345
 - e. Can't tell with the information provided.
 - f. none of the above
29. With the information provided, what will be the projected annual operating loan that you will need to take out in May 2008? This is the additional loan for that month.
- a. \$2,287
 - b. \$0
 - c. \$25,903
 - d. -\$25,903
 - e. Can't tell with the information provided.
 - f. none of the above
30. If I.M. projected a hay value price of \$100.00 per ton, what is the projected value of hay in inventory in July 2008?
- a. \$2,500
 - b. \$6,000
 - c. \$4,600
 - d. \$3,840
 - e. none of the above

31. What is the projected bushels of soybeans I.M. Coasting will have in inventory at the end of the year 2008?
- a. 1680 bushels
 - b. 1850 bushels
 - c. 2490 bushels
 - d. 0 bushels
 - e. 3530 bushels
32. What is the number of raised hogs in inventory in June 2008?
- a. 188 pigs
 - b. 189 pigs
 - c. 186 pigs
 - d. 185 pigs
 - e. Can't determine with information provided.
 - f. none of the above
33. What is the projected net farm income for I.M. for 2008?
- a. \$48,053
 - b. \$209,507
 - c. \$36,305
 - d. \$27,702
 - e. \$500
 - f. none of the above
- OR
34. What would the projected level of accrued interest be for the annual operating (AO borrowing) loan for the month of June 2008? Note: This is just for June. (The interest rate is 6.5 percent.)
- a. \$297.56
 - b. \$148.66
 - c. \$1,683.70
 - d. \$140.31
 - e. \$2,510.98
 - f. Can't calculate with the information provided.
35. What is the projected operator surplus (opr. surplus) for the month of November 2008?
- a. \$20,590
 - b. \$500
 - c. \$17,344
 - d. \$3,246
 - e. none of the above
36. What is the projected current inventory change for 2008?
- a. \$86,661
 - b. \$5,717
 - c. \$13,306
 - d. \$36,306
 - e. none of the above

37. You purchased some cattle (Fin Yrly Str) in September 2008 for \$800 each. If you borrow 100 percent of the purchase price, how much new borrowing will you have in September 2008 for the cattle?
- a. \$27,000
 - b. \$36,000
 - c. \$60,000
 - d. \$25,200
 - e. Can't determine with the information provided.
 - f. none of the above

The following four questions are based on attached enterprise budgets for L.M. Coasting.

38. If the labor cost is \$10.00 per hour, what is the labor cost per acre of alfalfa hay?
- a. \$53.00
 - b. \$40.00
 - c. \$13.25
 - d. \$10.00
 - e. none of the above
39. Given the corn silage production budget and the cattle feeding (beef, finish yrly steer) budget, how many steers can you feed out if you have 20 acres of corn silage. (You are going to use all the corn for the cattle feeding and you will not purchase any corn silage.)
- a. 330 steers
 - b. 240 steers
 - c. 165 steers
 - d. Can't determine with the information provided.
 - e. none of the above
40. Given the information provided in the hay budget, the projected level of profit (income over all costs) per acre in year 1 is?
- a. \$300.00
 - b. \$44.75
 - c. \$295.00
 - d. \$150.00
 - e. Can't calculate with the information provided in the alfalfa hay budget.
41. If the soybean price was \$6.40 per bushel rather than the \$5.40 per bushel as projected in the budget, how much would the gross income per acre increase?
- a. \$40.00
 - b. \$30.00
 - c. \$50.00
 - d. \$20.00
 - e. none of the above

You are provided information as shown on 'Feeder Pig Worksheet' which is attached. There are two pages. They are used for the next six questions.

42. If the market hog price is \$40.00 rather than \$38.00 as in the budget, what is the estimated profit and return to management per head?
- a. \$.17
 - b. -\$10.23
 - c. -\$12.95
 - d. -\$5.76
 - e. none of the above
43. What is the corn cost per pig?
- a. \$27.88
 - b. \$21.88
 - c. \$14.96
 - d. \$8.41
 - e. \$9.76
 - f. none of the above
44. If the supplement price increases by \$.10 per pound, how much does the revenue per hog need to increase to cover the increase in supplement cost?
- a. \$4.56
 - b. \$11.90
 - c. \$6.75
 - d. \$2.95
 - e. none of the above
45. What is the estimated profit and return to management per group (use the information provided in the example)?
- a. in the \$2,515 range
 - b. in the -\$2,435 to -\$2,440 range
 - c. in the \$2,435 to \$2,440 range
 - d. in the -\$2,515 range
 - e. none of the above
46. What is the necessary revenue per market hog to produce hogs in the short run?
- a. \$103.83
 - b. \$95.20
 - c. #31.41
 - d. \$121.75
 - e. none of the above
47. What is the price of feeder pigs in this example?
- a. \$50.00 per head
 - b. \$38.00 per hundred pounds (cwt)
 - c. \$42.00 per hundred pounds (cwt)
 - d. \$40.00 per hundred pounds (cwt)
 - e. It cannot be determined with the information provided.

Attached find a Balance Sheet for I.M. Coasting dated January 1, 2003. This will be used for the next seven questions.

48. What is the current ratio for I.M. Coasting? (The way we discussed in class.)
- a. 1.12
 - b. 2.76
 - c. 2.13
 - d. 1.46
 - e. 2.0
 - f. none of the above
49. What is the working capital for I.M. Coasting?
- a. \$10,591
 - b. \$4,276
 - c. \$12,491
 - d. \$9,088
 - e. none of the above
50. What is the debt-to-asset ratio for I.M. Coasting's farm business? (You are preparing the ratio for your banker.)
- a. .3733
 - b. .5045
 - c. .4796
 - d. .7263
 - e. none of the above
51. What is the market valuation equity for I.M. Coasting?
- a. \$298,648
 - b. \$59,811
 - c. \$0
 - d. \$156,224
 - e. Can't determine with the information provided.
 - f. none of the above
52. What is the level of retained earnings/contributed capital for I.M. Coasting?
- a. \$320,650
 - b. \$298,648
 - c. \$395,061
 - d. \$224,237
 - e. \$238,836
 - f. Can't determine with the information provided.
53. How much has the land on the home farm increased in value since I.M. Coasting purchased the farm?
- a. \$104,000
 - b. \$184,000
 - c. \$80,000
 - d. \$134,593
 - e. none of the above

54. What is the farm business net worth for I.M. Coasting? (You are preparing for your banker.)
- a. \$395,061
 - b. \$280,014
 - c. \$600,664
 - d. \$224,237
 - e. none of the above

For the next two questions you have the following information for I.M. Coasting. Use information from the balance sheet if needed.

Net farm income from operation	=	\$75,000
Interest paid	=	\$25,000
Depreciation	=	\$30,000
Value unpaid family labor and mgmt	=	\$24,000
Operating expenses	=	-\$350,000
Gross revenue	=	\$425,000

55. What is the rate of return on farm assets (ROA) for I.M. Coasting? (Use assets reflected in the balance sheet. You do not have information to determine average assets.)
- a. 8.49%
 - b. 12.49%
 - c. 12.65%
 - d. 7.84%
 - e. none of the above
56. What is the rate of return on farm equity for I.M. Coasting? (Assume the equity or net worth is \$400,000.)
- a. 8.49%
 - b. 12.49%
 - c. 12.65%
 - d. 7.84%
 - e. none of the above
57. Factors that influenced leasing terms would include:
- a. what is customary to the area
 - b. bargaining position of each party
 - c. the value of the contribution made by each party
 - d. alternative opportunities of each party
 - e. all of the above can influence the leasing terms
58. Some steps in business decision making would include:
- a. analyze the alternatives
 - b. establish goals and objectives
 - c. identify potential alternatives
 - d. decide on which alternative(s) to select
 - e. all of the above are steps in decision making

Bonus Questions

(2 pts) 1. What is the name of the person sitting next to you in this class (on most days)?

(2 pts) 2. The score of the game this weekend will be:

Iowa State _____
Oklahoma State _____