

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

1. If the rate of return on assets is more than the interest rate, the rate of return on equity is:
- a. greater than the rate of return on assets
  - b. less than the rate of return on assets
  - c. negative
  - d. equal to rate of return on assets
  - e. none of the above

The next question is based on the following information:

Cash farm expense	\$200,000
Grain inventory decrease	\$10,000
Cash farm income	\$300,000
Depreciation	\$20,000
Family labor (opportunity) charge	\$18,000
Market livestock inventory increase	\$5,000
Equity	\$250,000

2. What is the net farm income from operations for the information provided?
- a. \$95,000
  - b. \$100,000
  - c. \$90,000
  - d. \$75,000
  - e. \$105,000
3. Which of the following would appear on a profit and loss statement?
- a. your liabilities
  - b. your assets
  - c. the principle you paid on your land loan
  - d. your net farm income from operations
  - e. c and d above

The next five questions are based on the following information:

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

Net farm income from operations	\$50,000
Average assets	\$400,000
Average liability	\$150,000
Interest expense	\$20,000
Opportunity cost of capital	10%
Unpaid labor charge	\$25,000
Unpaid management charge	\$15,000
Return per \$100 feed	\$250

4. What is the return to management for Clone Acres?
  - a. \$10,000
  - b. \$-10,000
  - c. \$5,000
  - d. \$25,000
  - e. none of the above
  
5. If Clone Acres return to assets was \$20,000 (not the correct answer), what is the rate of return on assets?
  - a. 5.0%
  - b. 13.33%
  - c. 8.0%
  - d. 1.25%
  - e. none of the above
  
6. What is the average interest cost (rate) for Clone Acres?
  - a. 5%
  - b. 13.33%
  - c. 8%
  - d. 12%
  - e. none of the above
  
7. What is Clone Acres rate of return on equity (ROE)?
  - a. 2.50%
  - b. 4.00%
  - c. 12.50%
  - d. 12.00%
  - e. none of the above
  
8. What is Clone Acres return to assets?
  - a. \$10,000
  - b. \$70,000
  - c. \$45,000
  - d. \$30,000
  - e. none of the above

9. The process of finding the present value of an amount you will receive in the future is called:
- a. compounding
  - b. discounting
  - c. amortizing
  - d. budgeting
  - e. none of the above
10. In a recent lab you calculated the debt-to-asset ratio which you could sustain. If you are earning an average return on assets of 6 percent and your average interest rate on borrowed money is 8 percent, the maximum debt-to-asset ratio you can sustain is:
- a. 6 percent
  - b. 48 percent
  - c. 133 percent
  - d. 75 percent
  - e. none of the above
11. Using a lower compound rate will cause the future value of an amount you have today to:
- a. increase
  - b. decrease
  - c. remain constant
  - d. increase for short time periods but decrease for time periods of over 10 years
  - e. none of the above

*See next page* ✓ **The next three questions are based on the following information.**

You have the option to purchase a farm for \$150,000. You will be taking out a 20 year loan and wish to evaluate the investment over the 20 year period. You project that you will have an annual return or profit of 7 percent of the investment or purchase price and that land values will increase, on average, 5 percent per year. Your opportunity cost (discount rate) of capital is 8 percent.

12. What is the present value of the 7 percent annual profit? (Attached tables may be helpful for this calculation.)
- a. \$210,000
  - b. \$150,000
  - c. \$103,090
  - d. \$73,636
  - e. \$48,940
13. What is the present value of what the farm land value will be in 20 years? (Attached tables may be helpful for this calculation.)
- a. \$150,000
  - b. \$397,995
  - c. \$85,390
  - d. \$102,850
  - e. \$124,537

- ✓ 14. If the discount rate is 10 percent, what is the present value of the farm purchase?
- a. \$59,158
  - b. \$89,393
  - c. \$150,000
  - d. \$148,551
  - e. \$22,296
15. You have taken out a \$25,000 loan to use in purchasing that four-wheel drive pick-up of your dreams. You have ISU license plates which say "Road Hog". It has it all: wide 'mud' tires, high axles, etc., with ladder to get in and out of the 'beast', chrome running boards and dual stacks, velvet seat covers, computer hook up for market reports, etc. The loan is at 6 percent for 5 years. If you are making equal total principle payments annually of \$5,000 what is the level of interest you will be paying in the fourth year of the loan?
- a. \$1,500
  - b. \$600
  - c. \$1,200
  - d. \$900
  - e. none of the above

The following information is for the next two questions.

ISU Farms has the following information and would like to know what returns per \$100 feed fed was for the cattle feeding operation.

Sales	\$240,000
Livestock Inventory change	+\$10,000
Cattle purchases	\$100,000
Value feed fed	\$70,000
Purchased feed	\$20,000
Beginning inventory	\$80,000

16. Given the above information, and that total costs were \$250; non-feed costs was \$150.00; while feed costs represented \$100 'ISU farms':
- a. made money (profit) in the cattle feeding operation
  - b. lost money in the cattle feeding operation
  - c. can't determine with the information provided
17. Given this, what is the return per \$100 feed fed?
- a. \$342.86
  - b. \$328.57
  - c. \$200.00
  - d. \$185.71
  - e. none of the above

18. The tenant bears the most risk with:
- a. a cash rent lease
  - b. a 25-75 crop share rent lease
  - c. a mix of base cash rent and crop share lease
  - d. a 50-50 crop share rent lease
19. You have pulled together the following information for an investment alternative. You can invest in production of a specialty crop. You have determined that your risk free discount rate is 7 percent. You also feel that the enterprise has some risk and that the risk premium is 3 percent. You project that the profit is \$5,000 per year. Given this information, what is the present value of the profit over a ten year period?
- a. \$40,555
  - b. \$30,723
  - c. \$50,000
  - d. \$79,687
  - e. \$60,031

20. ISU Acres provided you with the following information:

Value of farm production	\$300,000
Total farm assets	\$500,000
Total liabilities	\$300,000
Grain sales	\$100,000

Given this, what is the asset turnover for ISU Acres?

- a. .4
  - b. 5.0
  - c. .67
  - d. .6
  - e. 1.0
21. Loyd Brown talked of responsibilities of professional farm managers. These included:
- a. marketing
  - b. accounting
  - c. production
  - d. communicating
  - e. all of the above
22. Loyd Brown, a guest speaker in 330 is:
- a. the President of Hired Farm Managers
  - b. the President of Hertz Farm Management
  - c. a stock broker
  - d. a banker
  - e. the President of Wells Fargo

The following information is for questions 23-25. The investment is \$20,000 and the terminal value is zero.

Year	Net Cash Revenue
1	\$4,000
2	\$4,000
3	\$4,000
4	\$4,000
5	\$4,000
6	\$4,000
7	\$4,000
Total	\$28,000

23. If the annual depreciation is \$2,000, what is the simple rate of return?
- a. 20 percent
  - b. 10 percent
  - c. 5 percent
  - d. 25 percent
  - e. none of the above
24. If the discount rate is 7 percent, what is the net present value of the investment. Recall that the terminal value is zero. (An attached table may be useful for this question.)
- a. \$8,000
  - b. \$1,557
  - c. -\$8,000
  - d. \$3,490
  - e. -\$2,150
25. Given the above information, what is the payback period?
- a. 2 years
  - b. 7 years
  - c. 6 years
  - d. 3 years
  - e. none of the above