

Exam #3 – 8:00 section or 9:00 section (**circle one**)

**Multiple Choice.** Circle the best answer. (**3 pts. each**)

1. The process of adjusting a sum received or paid in the future to find its current or present value is:
  - a. Compounding
  - b. Discounting
  - c. Internal Rate of Return
  - d. Net Present Value
  
2. An interest rate or discount factor which does **not** include an adjustment for inflation is called:
  - a. Compounding
  - b. Discounting
  - c. Nominal
  - d. Real
  
3. If you are estimating the Net Present Value of an investment and do **not** include inflation in your budgeted net cash flows, what interest rate or discount factor should you use?
  - a. The rate charged by a lender
  - b. The inflation rate
  - c. The nominal interest rate or discount factor
  - d. The real interest rate or discount factor
  
4. Which of the following is **not** an example of *financial risk*?
  - a. Unexpected changes in loan requirements
  - b. Variability in interest rates
  - c. Variability in net farm income
  - d. A lender withdrawing from agricultural lending
  
5. An unexpected change in international trade policy is an example of:
  - a. Financial Risk
  - b. Legal Risk
  - c. Price Risk
  - d. Production and Technical Risk
  
6. Which of the following expenses are **not** included on a whole farm Cash Flow Budget?
  - a. An annual interest payment on a machinery loan
  - b. An annual principle payment on a machinery loan
  - c. Annual depreciation expense on farm machinery
  - d. Annual federal and state income tax expenses

7. One method used to resolve a negative cash flow for an economically attractive investment is to increase the length of the loan used to finance the investment. This will:
- Reduce the total interest paid over the length of the loan
  - Increase the total interest paid over the length of the loan
  - Have no impact on the total interest paid over the length of the loan
  - Cause the lender to reevaluate the loan
8. Which of the following is **not** another recommended method used to resolve a negative cash flow for an economically attractive investment?
- Arrange for smaller loan payments and include a *balloon payment* at the end of the loan
  - Use excess cash flows from another part of the business
  - Reduce the loan amount by using savings or other financial reserves
  - Use the real interest rate rather than the nominal interest rate
9. Assume that you perform a Net Present Value analysis for installing new drain tile on land you own, and use a 9% discount factor. However, the estimated Net Present Value from this analysis was negative. This suggests:
- This may not be the best use of your funds
  - The Internal Rate of Return is less than 9%
  - This investment will not cash flow
  - Both A and B
  - Both A and C
10. Yield records from your farm show that soybean yields on owned land have averaged 46 bushels per acre (bu./a) over the past 10 years. And, that the highest yield during that time was 66 bu./a, while the lowest yield was 28 bu./a. This results in a range of 38 bu./a. The calculated yield variance was 102.0 bu.<sup>2</sup>/a. and calculated standard deviation was 10.1 bu./a. What is the *coefficient of variation* for soybean yields on owned land?
- 1.43
  - 0.83
  - 0.45
  - 0.22
11. You have been reviewing the past 10 years of corn yield records for two different tracts of rented land, and find that they have the same average yield. However, the tract you rent from Ole Olsen has an estimated standard deviation of 35 bu./a. while the tract you rent from Pete Petersen has an estimated standard deviation of 31 bu./a. This means:
- Ole Olsen's land has less variable corn yields than Pete Petersen's land
  - Pete Petersen's land has less variable corn yields than Ole Olsen's land
  - You are paying too high a rent for Ole Olsen's land
  - You are paying too high a rent for Pete Petersen's land

12. You currently rent land from Ole Olsen. Earlier this spring, Ole proposed switching from a crop share land lease agreement to a cash rent land lease agreement. What would this do to your risk exposure (measured as variability in net returns)?
- Risk would increase
  - Risk would decrease
  - Risk would be unchanged
  - Risk would be eliminated
13. Loyd Brown discussed five primary services that Hertz Farm Management provides to their clients. Which of the following is **not** one of these services?
- Real estate auctions
  - Professional farm management services
  - Real estate and commercial appraisals
  - Farm machinery appraisals
14. Loyd Brown listed eight criteria that are used to select new farm operators for property they manage. Which of the following is **not** one of these criteria?
- Good communication and people skills
  - Good marketing skills
  - Modern machinery and equipment
  - Timely field operations
15. Multiple Peril Crop Insurance (MCPI) policies provide insurance against:
- Catastrophic losses only
  - Harvested yields below a percentage of the Actual Production History (APH)
  - Price reductions below a percentage of the average Chicago Board of Trade futures price for selected months
  - Gross Revenue reductions below a targeted level, based upon Actual Production History (APH) and average Chicago Board of Trade futures prices for selected months
16. Federal Crop Insurance covers losses due to all of the following **except**:
- Inferior management
  - Excessive moisture and flooding
  - Hail
  - Excessive temperatures during pollination
17. You should include a *Risk Premium* in the discount factor of a Net Present Value analysis when you:
- Evaluate an investment during times of high inflation
  - Evaluate an investment during time of deflation
  - Evaluate an investment with cash flows that are highly variable or hard to predict
  - Evaluate an investment with net cash flows that decrease over time

18. The *Internal Rate of Return* is the interest rate or discount factor which:

- Results in a positive Net Present Value
- Results in a negative Net Present Value
- Results in a Net Present Value of zero

You are considering renting an extra 160 acres of land in 2008 and have three alternative production strategies; A) plant 100 % to corn, B) plant 100% to soybeans, or C) plant 50% corn - 50% soybeans. However, this year's total input costs are 35% higher than last year and you are concerned that fall prices may not be high enough to cover the increased input costs. You have used a spreadsheet to prepare 12 different partial budgets which consider four different price conditions (low, moderate, high and superior) for each of the three different cropping plans. You have also assigned subjective probabilities to each of the four price conditions. This information is summarized in the table below. **Please answer Questions 19-21 using the information in this table.**

Fall Market Price Conditions	Subjective Probabilities	Net Income/A. for 100% Corn (A)	Net Income/A. for 100% Soybeans (B)	Net Income/A. for 50% Corn – 50% Soybeans (C)
Low	0.2	-30.00	-35.00	-32.50
Moderate	0.3	-25.00	-15.00	-20.00
High	0.4	45.00	65.00	55.00
Superior	0.1	110.00	95.00	102.50
Expected Value		15.50	24.00	19.75
Minimum Value		-30.00	-35.00	-32.50
Maximum Value		110.00	95.00	102.50
Range		140.00	130.00	135.00

19. Which strategy would you select if you were using the *Most Likely Outcome* risk decision rule?

- Strategy A: 100% Corn
- Strategy B: 100 % Soybean
- Strategy C: 50% Corn – 50% Soybean
- None of the above

20. Which strategy would you select if you were using the *Maximum Expected Value* decision rule?

- Strategy A: 100% Corn
- Strategy B: 100 % Soybean
- Strategy C: 50% Corn – 50% Soybean
- None of the above

21. Which strategy would you select if you were using the *Safety First* risk decision rule?

- Strategy A: 100% Corn
- Strategy B: 100 % Soybean
- Strategy C: 50% Corn – 50% Soybean
- None of the above

22. Assume you purchase a new row crop planter and borrow \$21,000 for 7 years at 7.5% interest. If the new loan has equal annual principle payments, what is the annual principle amount due each year?
- \$ 1,575
  - \$ 3,000
  - \$ 4,575
  - None of the above
23. How much interest would you pay at the end of the **second** year for the loan in Question #22?
- \$ 3,000
  - \$ 1,575
  - \$ 1,350
  - \$ 1,260
24. Assume you purchase a new row crop planter and borrow \$21,000 for 7 years at 7.5% interest. However, your lender suggests amortizing the loan so the total annual payments (principle plus interest) are equal. What would your total annual payment be for this type of loan? (NOTE: the *present value factor* for 7 years at 7.5% interest is 0.60275 and the *amortization factor* for 7 years at 7.5% interest is 0.1888)
- \$ 1,575
  - \$ 3,965
  - \$ 4,575
  - \$ 12,658
25. How much interest would you pay at the end of the **first** year for the loan in Question #24?
- \$ 1,396
  - \$ 1,575
  - \$ 3,965
  - \$ 4,575
26. What would be the impact on the total amount of interest paid over the life of the loan by changing from a loan with equal annual *principle* payments to a loan with equal annual *total* payments (principle plus interest)?
- The total amount of interest paid over the life of the loan will decrease
  - The total amount of interest paid over the life of the loan will increase
  - The total amount of interest paid over the life of the loan will not change
27. Which of the following is **not** one of the four key pieces of information required to perform an investment analysis:
- Terminal or salvage value
  - Interest rate or discount factor
  - Annual cash revenues and expenses
  - Initial cost or investment
  - All of the above are required

28. Preparing a monthly whole farm cash flow is useful for: **(choose the best answer)**
- Estimating the maximum borrowing needs for an operating loan
  - Estimating the total annual cash inflows and total annual cash outflows
  - Establishing a repayment plan for an operating loan
  - All of the above
  - None of the above
29. Using hedging strategies and/or purchasing options are commonly used to manage which one of the following sources of risk? **(choose the best answer)**
- Production Risk
  - Market Risk
  - Financial Risk
  - Legal Risk
  - Human Risk
30. Purchasing health insurance is commonly used to manage which one of the following sources of risk? **(choose the best answer)**
- Production Risk
  - Market Risk
  - Financial Risk
  - Legal Risk
  - Human Risk

**Extra Credit (2 pts):** In class, I claimed that an investment analysis has two steps. The first is to perform an economic analysis to determine if the investment is an appropriate use of your resources. The second is to perform a cash flow analysis to evaluate how to finance the investment. Which of these two steps is more important?

- The first step, an economic analysis
- The second step, a cash flow analysis
- Both are important
- I am wrong; neither are important

**Extra Credit (2 pts):** How do you spell my name?

- Frayne Olsen
- Frayne Olson
- Frane Olsen
- Frane Olson
- Frain Olsen
- Frain Olson

**Answers:** (“white” test)

1. b
2. d
3. d
4. c
5. b
6. c
7. b
8. d
9. d
10. d
11. b
12. a
13. d
14. b
15. b
16. a
17. c
18. c
19. b
20. b
21. a
22. b
23. c
24. b
25. b
26. b
27. e
28. d
29. b
30. e

**Extra Credit 1:** c**Extra Credit 2:** b