Part I: Multiple Choice. Circle the best answer (3 1/3 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   c. it is obsolete.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 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 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 whole farm budget:
   a. you only evaluate the costs and return for the items that are changing.
   b. you evaluate all the revenue of the operation as costs are fixed.
   c. you only evaluate the fixed costs for the operation.
   d. you only compare the return for the alternative enterprise.
   e. None of the above represent a whole farm budget.

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 asset?
   a. Total liability on a 20 year farm loan.
   b. Total liability on an 6 year building loan.
   c. Value of land.
   d. The value of corn you have in inventory you will feed next year.
   e. None of the above.
7. In preparing a balance sheet it is necessary to place a value on your assets. Methods for asset evaluation would include:
   a. purchase cost, cost less depreciation, two times the market value.
   b. cost less depreciation, purchase cost, one half the purchase cost.
   c. income capitalization, cost less depreciation, net market price.
   d. replacement cost less depreciation, purchase cost, the value your neighbor uses.
   e. a and c above.

8. Reasons why you would keep records would include:
   a. a basis for comparison with how you have done over time.
   b. a basis for comparison with similar types of farming operations.
   c. a basis for comparison with your goals.
   d. record results can be used for planning for the future.
   e. all are reasons for keeping records.

9. Items or options you would consider in choosing an accounting (record) system would include:
   a. accounting period
   b. single versus double entry
   c. cash versus accrual accounting
   d. all of the above should be considered

The following three questions (10-12) are based on the attached corn budget.

10. Given the attached corn budget, if the price of corn is $5.00 per bushel, what is the gross margin for an acre of corn? (Assume all costs are as provided in the budget.)
    a. $202.02
    b. $427.04
    c. $474.98
    d. $487.24
    e. None of the above.

11. Given the attached corn budget, what is the breakeven price for corn per bushel to cover all costs? (Assume all costs are as provided in the budget.)
    a. $1.95
    b. $1.61
    c. $3.56
    d. $5.85
    e. None of the above.

12. For the attached corn budget, and if the price of corn is $5.00 per bushel, what is the breakeven price for soybeans where the gross margin of corn is equal to the gross margin of soybeans? The variable costs for soybeans $150.00 per acre and the yield is 45 bushels per acre.
    a. $9.89 per bushel
    b. $10.45 per bushel
    c. $12.82 per bushel
    d. Can’t determine with the information provided.
    e. None of the above.
The following six questions (13-18) are based on the attached “Swine Production-One Litter” budget.

13. How much soybean meal is fed per litter?
   a. 105 bushels
   b. 120 pounds
   c. 1013 pounds
   d. 12 pounds
   e. None of the above.

14. Given the attached “Swine Production-One Litter” budget, what is the income over variable costs (gross revenue) per litter if the market pig price is $.50 ($50.00 per hundred pounds) and the cull sow price is $40.00 per hundred pounds?
   a. $1145.00
   b. $389.72
   c. $194.93
   d. $100.00
   e. None of the above.

15. If the total variable costs excluding interest was $700.00 (not the correct value) what is the interest on variable costs for the budget?
   a. $63.00
   b. $31.50
   c. $26.25
   d. None of the above.
   e. Can’t determine with information provided.

16. What is the labor rate used in the “Swine Production-One Litter” budget?
   a. $15.00 per hour
   b. $12.00 per hour
   c. $18.00 per hour
   d. None of the above
   e. Can’t determine with information provided.

17. For the “Swine Production-One Litter”, the replacement gilts are?
   a. Raised on the farm
   b. Purchased
   c. Can’t determine with the information provided.
   d. None of the above.

18. What is the breakeven market hog selling price for variable costs given the budget information provided?
   a. $32.59 per hundred pounds or 32.59¢ per pound
   b. $34.18 per hundred pounds or 34.18¢ per pound
   c. $42.79 per hundred pounds or 42.79¢ per pound
   d. $36.31 per hundred pounds or 36.31¢ per pound
   e. None of the above.
The next seven questions (19-25) are based on the following information.

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

- Purchase price = $150,000
- Salvage value = $40,000
- Years of useful life = 8 years
- Fuel cost = $3.00/gallon
- Fuel use (gallon/hour) = 4.5
- Taxes = 1% of new cost
- Labor cost = $18.00/hour
- Labor amount (use) = 750 hours
- Repairs = 5% of new cost
- Number of acres = 500 acres
- Interest rate = 6%
- Insurance and housing = 2% of new cost

19. In a budget for tractor ownership, what is the annual depreciation? (Use straight line as you did in the Lab assignment)
   a. $23,750
   b. $15,000
   c. $13,750
   d. $6,250
   e. None of the above.

20. In a budget for tractor ownership, what is the annual level of taxes?
    a. $1,500
    b. $1,000
    c. $15,000
    d. $2,000
    e. None of the above.

21. What is the level of fuel cost per acre? (As indicated, you will use the tractor on 500 acres.)
    a. $13.50
    b. $9.00
    c. $20.25
    d. $18.75
    e. None of the above.

22. In a budget for tractor operating cost, what is the annual repair cost per hour?
    a. $9.50
    b. $12.50
    c. $15.00
    d. $10.00
    e. None of the above.
23. In a budget for tractor operating cost, what is the annual labor cost?
   a. $9,000  
   b. $15,000  
   c. $12,000  
   d. $13,500  
   e. None of the above.

24. In a budget for tractor ownership, what is the average annual interest cost?
   a. $6,600  
   b. $11,400  
   c. $5,700  
   d. $9,000  
   e. None of the above.

25. If you use the tractor for 400 acres rather than the 500 acres, what happens to your annual operating cost (variable cost)?
   a. Remains unchanged.  
   b. Decreases.  
   c. Increases.  
   d. None of the above.

The next three questions (26-28) are based on the following information for Clone's Balance Sheet.

<p>| | |</p>
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<tr>
<td>Fixed liabilities</td>
<td>$150,000</td>
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<tr>
<td>Current liability</td>
<td>50,000</td>
</tr>
<tr>
<td>Intermediate liability</td>
<td>100,000</td>
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<tr>
<td>Fixed assets</td>
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<tr>
<td>Current assets</td>
<td>60,000</td>
</tr>
<tr>
<td>Intermediate assets</td>
<td>80,000</td>
</tr>
</tbody>
</table>

26. Is Clone solvent?
   a. Yes  
   b. No  
   c. Can't tell with information provided.

27. What is Clone's current ratio? (As calculated for Cy Acres in class and in the text.)
   a. 1.458  
   b. .833  
   c. 1.20  
   d. 2.0  
   e. None of the above.

28. What is Clone's working capital?
   a. $10,000  
   b. - $10,000  
   c. $50,000  
   d. $20,000  
   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 $220,000. Given this, you calculate the annual fixed ownership cost to be $22,000 per year. Your operating cost per acre is $15.00 per acre while your fixed cost per acre is calculated to be $40.00 per acre.

29. Given this, how many acres are needed before you can justify ownership? (Don't consider any other factors such as potential yield differences, etc. for this question)
   a. At least 1,120 acres
   b. At least 5,600 acres
   c. At least 1,400 acres
   d. At least 1,886.67 acres
   e. None of the above.

30. 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 so they can get over as many areas as possible. The net effect is you get one bushel more of soybeans per acre if you custom combine your soybeans. You project that the soybean price will be $9.00 per bushel. Given this, what is the break even number of acres? (However, with this calculation, assume that the annual fixed ownership cost is $25,000 per year; the custom rate per acre is $30.00, the operating cost is $10.00 per acre, and the fixed cost per acre is $35.00.)
   a. At least 2,272.73 acres
   b. At least 1,250.00 acres
   c. At least 862.09 acres
   d. At least 500.00 acres
   e. None of the above.

Part II. Bonus (2 points)

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.