Farm Business Management

A. Circle the correct answer. You may put a square around your second choice. (4 pts. each)

1. Under an APH (yield) crop insurance policy, a farmer’s yield loss results in an indemnity payment equal to the lost bushels times:
   a. the average futures price in February
   b. the average futures price in October
   c. the 10-year average cash price for that commodity
   d. the USDA projected harvest cash price, made in January

2. The first attempts by private companies to provide crop insurance to farmers in the U.S.A. failed mostly because:
   a. they did not cover a large enough geographical area to spread out their risk
   b. farmers did not believe they needed crop insurance because yields had been good
   c. the USDA did not subsidize the premiums
   d. farmers filed dishonest claims

3. Farmers can choose to buy crop insurance policies that guarantee them ________ of their expected yield or gross revenue.
   a. 50% to 100%
   b. 60% to 80%
   c. 50% to 85%
   d. 75% (only)

4. The Happy Acres Farm in the class exercise was in a high-risk position due mainly to:
   a. having a large amount of debt for purchased land
   b. producing mostly “niche market” commodities with very uncertain markets
   c. carrying out intensive livestock production with a high potential for disease
   d. farming a large number of cash rented acres with a small owned land base

5. Which type of budget would be most appropriate for deciding whether to sell this year’s calf crop as feeder calves or place them in a custom feedlot and sell them when they reach final slaughter weight?
   a. whole farm
   b. cash flow
   c. enterprise
   d. partial
6. Which type of farm would find it most useful to use futures contracts and commodity options to market their products?
   a. low volume, high value producers of specialty crops
   b. high volume, narrow margin producers of generic commodities
   c. small, part-time producers
   d. service providers such as custom operators

7. Separating income and expenses by enterprise with a computerized accounting system is usually done by:
   a. adding an extra digit to the account code when a transaction is entered
   b. estimating at the end of the year what percent should go to each enterprise
   c. dividing them equally among all enterprises at the end of the year
   d. creating enterprise budgets in advance

8. Which measure of profitability is most useful for comparing farms that differ widely in both scale of production and degree of indebtedness?
   a. net farm income (accrual) - $
   b. return to management - $
   c. return on assets (ROA) - %
   d. return on equity (ROE) - %

9. Linear programming is a useful tool for finding:
   a. the most profitable combination of enterprises on a farm
   b. the breakeven selling price for a commodity
   c. how much operating capital a farm needs to borrow each year
   d. the most profitable amount of fertilizer to apply on a crop

10. Which of the following commodity exchanges trades corn and soybean contracts?
    a. Chicago Board of Trade
    b. Kansas City Board of Trade
    c. New York Commodity Exchange
    d. Minneapolis Grain Exchange

11. Which type of cost is not deducted from gross income to find net farm income?
    a. depreciation
    b. interest paid on loans outstanding
    c. opportunity cost of operator’s own labor
    d. farmland real estate taxes

12. Livestock Revenue Insurance (LRP) helps livestock producers reduce risk by:
    a. paying them the value of animals that die from disease
    b. paying dairy farmers when the milk price falls below a set level
    c. paying hog, cattle or lamb feeders when the futures price at the time they sell their livestock is below the guarantee price they purchased
    d. paying hog, cattle or lamb feeders if the cash price for which they sell their livestock is below the guarantee price they purchased
B. Answer as indicated. Show your work where needed.

13. Wendy Wheatgrower produces dryland wheat in Western Kansas. She estimates the following probabilities for her average yield next year, based on past years:

- 50 bu. per acre 20%
- 40 bu. per acre 40%
- 25 bu. per acre 30%
- 0 bu. per acre 10%

a. How much is her “expected value” for her wheat yield?  

__________ bu./acre

b. Wendy is considering three different types of crop insurance policies. Her actual production history (APH) yield is 35 bushels per acre. How much is her final guarantee for each one at the 80% level? Assume:
   - (1) The USDA projected harvest cash price is $3.00 per bushel.
   - (2) The average futures price for wheat is $3.50 per bushel for the month prior to buying the insurance and
   - (3) the average futures price is $4.50 per bushel at harvest.  

(2 pts. each)

1) APH yield insurance ________ bushels/acre
2) Basic revenue insurance $_______ per acre
3) Harvest price option revenue insurance $_______ per acre

c. How much would her indemnity payment from the insurance company be for each type of policy if her actual yield was only 25 bushels per acre?  

(2 pts. each)

1) APH yield insurance $______ per acre
2) Basic revenue insurance $______ per acre
3) Harvest price option revenue insurance $______ per acre

d. Wendy hedged half of her expected production prior to harvest at the $3.50 per bushel futures price. What would her net price be if she sold it at harvest for $4.00 (cash price) and the harvest futures price was $4.50? Ignore broker’s fees.  

(3 pts.)

$______ per bushel
e. Do you think she made a good marketing decision? Why or why not?  

f. Assume she purchased put options instead, for a $3.75 strike price and a $.30 premium. What do you estimate the premium for the put options would be at harvest if the futures price was $4.50?  

$______ per bushel

g. What would her net price have been after selling the wheat at harvest for $4.00, including any gain or loss on the put options?  

$______ per bushel

14. Milky Way Farm, Inc. had the following cash inflows and cash outflows for producing milk last year.  

<table>
<thead>
<tr>
<th>Cash Inflows</th>
<th>Cash Outflows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk sales</td>
<td>Purchased feed</td>
</tr>
<tr>
<td>$180,000</td>
<td>$41,500</td>
</tr>
<tr>
<td>Cull cow and calf sales</td>
<td>Wages</td>
</tr>
<tr>
<td>31,000</td>
<td>72,000</td>
</tr>
<tr>
<td>New loans received</td>
<td>Supplies, repairs, utilities</td>
</tr>
<tr>
<td>20,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Total cash inflows</td>
<td>Health expenses</td>
</tr>
<tr>
<td>$231,000</td>
<td>15,000</td>
</tr>
<tr>
<td></td>
<td>Marketing and other</td>
</tr>
<tr>
<td></td>
<td>8,500</td>
</tr>
<tr>
<td></td>
<td>Loan payments: principal</td>
</tr>
<tr>
<td></td>
<td>47,000</td>
</tr>
<tr>
<td></td>
<td>interest</td>
</tr>
<tr>
<td></td>
<td>3,500</td>
</tr>
<tr>
<td></td>
<td>Purchase of equipment</td>
</tr>
<tr>
<td></td>
<td>16,000</td>
</tr>
<tr>
<td></td>
<td>Total cash outflows</td>
</tr>
<tr>
<td></td>
<td>$213,500</td>
</tr>
</tbody>
</table>

a. How much was their net cash flow for the year?  

$____________

b. How much was their total cash income?  

$____________

c. How much were their total cash expenses?  

$____________
15. What is the difference between cash accounting and accrual accounting? (4 pts.)

16. Give one advantage for each. (4 pts.)
   a. cash
   b. accrual

17. What is the difference between a cash flow budget and a statement of cash flows? (4 pts.)

18. List 3 general ways that a farm business can increase its market value net worth over time. (6 pts.)
   a.
   b.
   c.
19. List 3 strategies or tools a farmer can use to reduce production risk. (6 pts.)
   a. 
   b. 
   c. 

20. Indicate to which type of marketing tool each statement best applies. Answers can be used more than once. (2 pts. each)
   A. Cash market sale
   B. Forward contract
   C. Futures contract (hedge)
   D. PUT options

   _____ establishes a minimum price but allows the seller to benefit from future price increases
   _____ establishes a fixed price for a future sale, but obligates the producer to sell to a particular buyer
   _____ is the most risky if grain will be sold several months in the future
   _____ involves selling, then repurchasing, a contract
   ___ ___ can be used to sell any quantity of product (2 answers)
   ___ ___ require the seller to work through a commodity broker (2 answers)

21. What was the name of the required textbook for the course? (1 pt.)

   ____________________________________________________________

   Who were the authors (last names only)? (3 bonus pts.)

   ____________________  ____________________  ____________________

Have a great semester break!
Farm Business Management

1. d
2. a
3. c
4. d
5. d
6. b
7. a
8. c
9. a
10. a
11. c
12. c
13. 50 bu. per acre x 20% = 10
    40 bu. per acre x 40% = 16
    25 bu. per acre x 30% = 7.5
    0 bu. per acre x 10% = 0

   a.  = 33.5 bu/acre

   b.  1.  35 bu. x 80% = 28 bu/acre
       2.  35 bu. x $3.50 x 80% = $98/acre
       3.  35 bu. x $4.50 x 80% = $126/acre

   c.  1.  (28 – 25 bu.) x $3.00 = $9.00/acre
       2.  (25 bu. x $4.50) = $112.50
           (actual revenue exceeded guarantee)
       3.  (28 bu. x $4.50) – (25 bu. x $4.25) = $13.50/acre

   d.  $3.50 - $4.50 + $4.00 = $3.00/bushel

   e.  She gave up the possibility of gaining from a price increase, but prevented a loss if prices had decreased.

   f.  Value of a put option to sell futures at $3.75 when the market is $4.50 would be near zero. S0/bushel

   g.  $4.00 - .30 = $3.70/bushel

14. a.  $231,000 – 213,500 = $17,500

   b.  $180,000 + 31,000 = $211,000

   c.  $41,500 + 72,000 + 10,000 + 15,000 + 8,500 + 3,500 = $150,500

15. Cash records income when it is received and expenses when they are paid. Accrual records income when it is produced and expenses when they are incurred.

16. a. cash
    Simpler – follows cash transactions

   b. accrual
    More accurate picture of net income
17. A budget is a projection of expected cash inflows and outflows. The statement is the summary of the actual cash inflows and outflows.

18. a. retain net farm income  
b. invest nonfarm capital  
c. increase market value of capital assets

19. a. crop yield insurance, application of pesticides  
b. livestock herd health practices, crop-share lease  
c. irrigation of crops, confinement livestock buildings, crop diversification

20. D  
    B  
    A  
    C  
    A, B  
    C, D

21. Farm management

    Kay, Edwards, Duffy