

FFA Farm Business Management Career Development Event

State Preliminary

January, 2008

PART II

200 Points
2 Hours

Answer each question directly on the code sheet provided. Since there are usually several different approaches to solving each question, do not be concerned if your answer is a few pennies more or less than the alternatives provided. Many answers have been rounded off to the nearest whole dollar or nearest thousand dollars.

You should receive a package with 7 exhibits that are part of the test. Your test booklet should have 7 numbered pages of questions (including this page). There are 33 questions and each correct answer is worth 6 points. You may use a calculator.

Most budgets provided for this test include all costs other than the costs of overhead, risk and management (including the manager's labor contribution). The difference between specified costs and total receipts is called "returns to overhead, risk and management" and is abbreviated as ORM. Copies of the budgets are available at <http://nfrec.ifas.ufl.edu/Hewitt/budgets.htm>

For each question make only those assumptions specified for that question. Unless explicitly specified, assumptions do not "carry forward" to the next question.

All Federal Income Tax related questions in this contest are based on tax rules as specified in the IRS Farmer's Tax Guide for 2006 returns (Exhibit 7). The state final contest in April will use the Tax Guide for 2007 returns.

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Questions 51-65 refer to the cost of equipment and enterprise budgets in Exhibits 1-3. These budgets were prepared by Prof. Timothy Hewitt, an economist in the Food & Resource Economics Department, University of Florida. Unless otherwise directed, ignore the change in “interest on cash expenses” associated with additional or reduced cash expenses.

51. What are the total variable costs of producing ten acres of dryland corn?
- a. \$275.72
 - b. \$2,310.50
 - c. \$2,757.20
 - d. can't tell based on the information given
52. Sam plans to plant 120 acres of dryland corn. How many tons of potash should he buy?
- a. 7.2
 - b. 720.0
 - c. 3.6
 - d. 3.3
53. Sam's dryland corn budget includes an item for use of his pick-up truck for trips to the farm supply store. If Sam's farm is located 2.5 miles from the store, how many trips to the store are budgeted?
- a. 1
 - b. 2
 - c. 3
 - d. 4
54. On Sam's 120 acres of dryland corn, his per acre yield is 130 bushels and he sells the corn for \$3.80/bushel. What is Sam's return to ORM per acre?
- a. \$218.28
 - b. \$275.72
 - c. \$494.00
 - d. -\$142.67
55. A farmer with 200 acres of soybeans would need a production loan of approximately
- a. \$14,000
 - b. \$43,000
 - c. \$28,000
 - d. \$32,000

Questions 56-60 are based on the information concerning Miguel's farm in the table below:

Crop	Acres	Yield (bu/acre)	Price per bushel
Dryland corn	120	110	\$3.25
Soybeans	80	35	\$7.50

56. What is Miguel's total land rent?
 - a. \$8,000
 - b. \$40
 - c. \$6,000
 - d. \$4,800

57. What is Miguel's gross revenue?
 - a. \$40,245
 - b. \$63,900
 - c. \$34,800
 - d. \$92,400

58. What is Miguel's total return to ORM?
 - a. \$34,800
 - b. \$40,245
 - c. \$2,456
 - d. \$13,695

59. What is Miguel's total fixed costs?
 - a. \$50,205
 - b. \$8,953
 - c. \$12,476
 - d. \$34,800

60. Assuming an eight hour work day, how many man-days of labor must Miguel hire?
 - a. 37.5
 - b. 18
 - c. 42
 - d. 300

61. Jesse grows ten acres of okra. His yield is $800 \frac{1}{2}$ bu per acre. He adjusts the okra budget for his yield and calculates that his total cost per acre is
 - a. \$6,704.08
 - b. \$7,244.00
 - c. \$3,496.22
 - d. \$7,544.08

62. If Jesse produces just 600 ½ bu of okra, what is his break-even price on total costs?
- a. \$9.90
 - b. \$6.56
 - c. \$9.43
 - d. \$9.77
63. Regardless of his yield, if the price of okra falls below _____, Jesse will not harvest his crop.
- a. \$8.40
 - b. \$9.58
 - c. \$9.90
 - d. \$10.46
64. Jesse grows okra and provides all of his own labor and he owns the land on which the okra is grown. What are his total pre-harvest expenses per acre?
- a. \$824.08
 - b. \$614.12
 - c. \$700.08
 - d. \$490.12
65. Jesse has ten acres of okra with a yield of 700 ½ bu per acre. He sells his crop for \$10.00 per ½ bu. What is his total return to ORM?
- a. \$2,959.20
 - b. \$2,465.92
 - c. -\$2,513.96
 - d. -\$1,614.86

Questions 66-71 are based on the net worth statement for the Sherman farm shown in Exhibit 4.

66. What is the total equity (net worth) of the Sherman family at the end of 2007?
- a. \$329,100
 - b. \$484,367
 - c. \$2,436,700
 - d. \$789,100
67. What is the debt/equity (or leverage) ratio of the Sherman family at the end of 2007?
- a. 4.03
 - b. 2.00
 - c. 1.10
 - d. 0.91

68. During 2007, the current ratio of the Sherman family has _____ which means that liquidity _____.
- decreased; worsened
 - decreased, improved
 - increased; worsened
 - increased; improved
69. How much working capital did the Sherman family have at the end of 2006?
- \$169,212
 - \$55,200
 - \$30,700
 - \$57,800
70. During 2007, what significant change was made in the Sherman's operation?
- Sold land.
 - Acquired additional machinery.
 - Started a significant cow-calf operation
 - Changed from cash to accrual accounting method.
71. The Sherman's net capital ratio is a measure of
- liquidity
 - solvency
 - profitability
 - efficiency

Questions 72-77 deal with financial analysis. Each problem can be solved using the financial tables presented in Exhibits 5 and 6.

72. What is the present value today of \$600.00 to be received 6 years from now using a 6% discount rate?
- \$422.98
 - \$378.10
 - \$851.11
 - \$600.00
73. What is the value at the end of ten years of \$400.00 deposited in an account that earns 8% compounded annually?
- \$716.34
 - \$233.36
 - \$185.28
 - \$863.57

74. An investment in a machine has an annual cost of \$200.00 and an annual return of \$350.00. Using a discount rate of 6%, what is the net present value of this investment over the ten-year expected life of the machine?

- a. \$1,500.00
- b. \$1,977.12
- c. \$1,104.01
- d. \$2,426.87

75. Sue bought some additional land for \$1.2 million. She paid 40% cash as a down payment and financed the rest with a 20-year mortgage at 8%. What are her annual payments on the mortgage?

- a. \$62,773
- b. \$73,333
- c. \$36,000
- d. \$122,222

76. How much must Dwayne put into an account in each of the next 15 years such that he has \$80,000 at the end of 15 years? The account that earns 6% per annum.

- a. \$2,946.40
- b. \$5,333.33
- c. \$3,250.00
- d. \$3,437.04

77. How much more interest can Eric earn over the next 12 years if he deposits \$2,000.00 at 8% per annum rather than 6% per annum?

- a. \$400.00
- b. \$634.77
- c. \$1,011.95
- d. \$829.46

Questions 78-83 concern federal taxes. For all questions the IRS publication Farmers Tax Guide is the definitive source of information. A copy of the relevant portions of the Tax Guide are in Exhibit 7.

78. In 2004 Dusty bought a tractor for \$75,000. At the end of 2005, what is the adjusted basis of this tractor using MACRS-GDS 150% declining balance method with the half year convention?

- a. \$75,000
- b. \$52,620
- c. \$53,571
- d. \$48,280

79. Using the information in the previous question, how much depreciation will Dusty claim on his 2006 tax return?
- a. \$11,272.50
 - b. \$10,714.29
 - c. \$8,724.16
 - d. \$9,608.36
80. In 2002 Jorge established a small orange grove in Collier county at a cost of \$20,000. How much depreciation can he claim on his 2006 return?
- a. \$1,000
 - b. \$2,000
 - c. \$1,333
 - d. zero
81. Jane bought a small tractor for \$40,000 in 2002 and took a section 179 deduction for the full amount on her 2002 return. How much depreciation can she claim on her 2006 return?
- a. \$4,900
 - b. \$5,714
 - c. \$6,664
 - d. zero
82. In June, 2006 Hector bought a tractor for \$80,000 for use on his banana plantation in Costa Rica. How much depreciation can he claim on his 2006 return?
- a. \$8,560
 - b. \$10,000
 - c. \$4,000
 - d. \$11,429
83. During 2006 Swen sold a dairy cow for \$700. The cow had an adjusted basis of \$600. On his 2006 return, Swen
- a. must pay capital gains taxes on \$100.
 - b. should claim depreciation of \$600.
 - c. should claim depreciation of \$700.
 - d. will receive a tax credit of \$600.

END OF PART II