

FFA Farm Business Management Career Development Event

State Preliminary

January, 2006

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 9 exhibits that are part of the test. Your test booklet should have 8 numbered pages of questions (including this page). There are 33 questions and each correct answer is worth 6 points. You may use a calculator.

The 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 2004 returns (Exhibit 9). The state final contest in April will use the Tax Guide for 2005 returns.

Prepared by

Drs. Evan Drummond & Richard Weldon
Department of Food & Resource Economics
University of Florida
(352) 392-1826 ext. 212 & 216

Questions 51-65 are based on the 2005 budgets in Exhibits 1-5. These budgets were prepared by Professor Timothy Hewitt of the Food & Resource Economics Department, University of Florida.

51. It is 10:00am and Joe sits atop his 135hp tractor with a moldboard plow attached. How many more acres can he plow before he breaks for lunch at noon?
- 0.48
 - 4.17
 - 8.33
 - 20.0
52. Joe has been thinking about buying a 190hp tractor his neighbor has for sale. Using the information in the previous question, how many more acres could he plow before noon with a 190hp tractor than with his 135hp tractor?
- 11.11
 - 2.78
 - 8.33
 - 16.67
53. Joe has 90 acres that he intends to plant using the planter and his 135hp tractor. What are the total variable equipment costs for planting?
- \$124.24
 - \$6.30
 - \$145.89
 - \$90.54
54. Sam has 60 acres of dryland corn. This year his yield was 63 bu/acre. What is his breakeven price for total costs?
- \$3.34
 - \$4.12
 - \$3.18
 - \$3.92
55. Right now the cash price for corn is about \$2.00/bu. What yield would Sam have to have on his dryland corn to break even on total costs?
- 123.48 bu/acre
 - 106.45 bu/acre
 - 246.97 bu/acre
 - 180.45 bu/acre

56. Jake has a farm on which he grows dryland corn and cotton. Information on his farm is presented below:

Crop	Acres	Yield	Price
Dryland corn	60	60 bu/acre	\$2.25/bu
Cotton	130	720 lb/acre	\$0.89/lb

What percentage of his total cultivated acres is in cotton?

- a. 13%
 - b. 68%
 - c. 26%
 - d. 32%
57. Based on the information in #56, what is Jake's total variable cost of growing cotton?
- a. \$532.98
 - b. \$12,467.98
 - c. \$68,287.40
 - d. \$76,456.90
58. Based on the information in #56, what is Jake's total revenue?
- a. \$91,404
 - b. \$120,564
 - c. \$62,923
 - d. \$324,783
59. Based on the information in #56, what is Jake's total return to ORM?
- a. \$91,404
 - b. \$91,275
 - c. \$129
 - d. -\$4,698
60. The budget for bell peppers is based on what level of output?
- a. 200 ctn/acre
 - b. 250 ctn/acre
 - c. 300 ctn/acre
 - d. 400 ctn/acre
61. According to the bell pepper budget, how many pounds of lime are applied per acre?
- a. 0.5
 - b. 1,000
 - c. 2,000
 - d. 50

62. Dusty has 20 acres of bell peppers and he expects to harvest about 300 cartons per acre. If the price of bell peppers fell below _____, Dusty would let the crop rot in the field rather than harvesting it.
- a. \$4.57/ctn.
 - b. \$5.67/ctn.
 - c. \$7.79/ctn.
 - d. \$13.45/ctn.
63. If Dusty harvests 300 cartons/acre of bell peppers, what are his total costs per acre?
- a. \$3,611
 - b. \$4,036
 - c. \$2,336
 - d. \$4,461
64. Dusty's family provides all of the pre-harvest labor on his 20 acres of bell peppers. If he gets 300 cartons per acre, what is his break-even price on total costs?
- a. \$12.04
 - b. \$11.85
 - c. \$6.59
 - d. \$7.60
65. According to the bell pepper budget, how many pounds of mixed fertilizer are applied per acre?
- a. 10
 - b. 100
 - c. 1,000
 - d. 10,000

Questions 66-71 are based on the net worth statement (or balance sheet) for the White farm and ranch shown in Exhibit 6

66. What is the White's net worth on 12/31/2005?
- a. \$463,600
 - b. \$580,600
 - c. \$340,900
 - d. \$804,500

67. What significant changes occurred on the White farm during 2005?
1. Got out of the beef cattle business
 2. Bought a new tractor
 3. Sold some land
 4. Refinanced the mortgage
- a. 1 and 2
b. 1 and 4
c. 2 and 4
d. 1 and 3
68. During 2005 the White's current ratio
- a. deteriorated to 2.46
 - b. deteriorated to 3.17
 - c. remained relatively constant at about 2.83
 - d. improved to 3.17
69. The current ratio is a measure of
- a. liquidity
 - b. cash flow
 - c. solvency
 - d. equity
70. On 12/31/2005 the White's debt-equity (or leverage) ratio was
- a. 1.36
 - b. 0.28
 - c. 0.74
 - d. 2.24
71. On 12/31/2005, how much working capital did the White's have?
- a. \$126,500
 - b. \$86,600
 - c. \$463,400
 - d. \$804,500

Questions 72-77 deal with financial analysis. Each problem can be solved using the financial tables presented in Exhibits 7 and 8.

72. What is the present value of \$800.00 to be received 5 years from now using an 8% discount rate?
- a. \$480.00
 - b. \$800.00
 - c. \$283.71
 - d. \$544.47

73. If Sue puts \$200.00 in a savings account that pays 6% interest per year, how much will she have at the end of ten years?
- \$320.00
 - \$326.45
 - \$583.95
 - \$358.17
74. If you win the state lottery you do not receive all of your prize right away. Instead, you receive one-twentieth of the prize in each of the next 20 years. Suppose Sam won \$10 million. He would receive \$500,000 in each of the next 20 years. Using a 6% discount rate, what is the present value of his \$10 million prize?
- \$5,734,960
 - \$600,000
 - \$9,400,000
 - \$6,925,309
75. Ron and Sue want to start a college fund for their new son, Edwin. They plan to make equal deposits into an account earning 8% for each of the next 15 years. How much must the annual deposit be in order to have \$500,000 at the end of the 15 years?
- \$21,482
 - \$18,415
 - \$33,333
 - \$10,264
76. If Ron and Sue put \$2,000 per year into an account earning 8% per year, how much will they have at the end of 20 years?
- \$40,000
 - \$48,000
 - \$91,524
 - \$73,571
77. Kate bought 640 acres of prime Illinois farm land for \$4,000 per acre. She put down 20% in cash and financed the remainder with an 8% mortgage. It is a 30-year mortgage with annual payments. How much is her annual payment?
- \$68,267
 - \$93,186
 - \$148,785
 - \$181,917

Questions 78-83 concern federal taxes. For all questions the IRS publication Farmers Tax Guide is the definitive source of information. Portions of that publication are included as Exhibit 9.

78. Allison bought \$40,000 worth of feed in November, 2004 paying for it at that time. She fed the feed in March-April of 2005. Allison uses calendar year accounting. For the purposes of her Federal income tax, Allison charged the feed as an expense in 2005. Therefore, Allison is using which method of accounting?
- cash method
 - hybrid method
 - deferral method
 - accrual method
79. Miguel bought a new tractor from the dealership for \$80,000. He paid \$10,000 in cash; traded in his old tractor for a \$20,000; and, financed the remaining \$50,000 through his local bank. For the purposes of Federal income tax, what is the cost basis of the new tractor?
- \$80,000
 - \$70,000
 - \$60,000
 - \$50,000
80. Miguel placed his tractor into service in April, 2004. In figuring depreciation he uses MACRS-GDS. The tractor will be considered
- 3-year property.
 - 5-year property.
 - 7-year property
 - 10-year property
81. Using the assumptions in #79 and #80, how much depreciation can Miguel claim on the tractor for the 2004 tax year?
- \$8,000
 - \$8,568
 - \$11,429
 - \$20,000
82. In 1997 Marty spent \$300,000 establishing a new orange grove. How much depreciation on the grove can he claim on his return for 2004?
- \$30,000
 - \$14,500
 - \$22,489
 - \$16,839

83. Sarah is a sales representative for a major seed company. In 2002 she bought a new Lexus for \$40,000. In 2004 she put 20,000 miles on the car in business use and 5,000 miles in personal (non-business) use. How much depreciation can she claim on her 2004 return?

- a. \$2,950
- b. \$6,012
- c. \$7,140
- d. \$2,360

End of Part II