

# FFA Farm Business Management Career Development Event

## State Preliminary

January, 2005

### ##### 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 8 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.

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 8).

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*Questions 51-65 are based on the 2003 budgets in Exhibits 1-4. These budgets were prepared by Professor Timothy Hewitt of the Food & Resource Economics Department, University of Florida.*

51. Sam had a dryland corn yield of 63 bu/acre. What was his breakeven price on total costs?
- \$3.94
  - \$3.75
  - \$3.01
  - \$2.63
52. What size of combine did Sam use on his dryland corn?
- small
  - medium
  - large
  - can't tell based on the information provided
53. What were Sam's cash expenses on 40 acres of dryland corn?
- \$7,588
  - \$8,243
  - \$9,454
  - \$12,859
54. If the price of dryland corn is \$2.75 per bushel, what is Sam's breakeven yield on total costs?
- 64 bu/acre
  - 77 bu/acre
  - 86 bu/acre
  - 92 bu/acre
55. The budget for peanuts includes an item for nematicide. Nematicide is used to kill
- nemats
  - fungus
  - leaf eating insects
  - microscopic worms in the soil
56. The budget for peanuts includes an item for a scouting fee. The most likely recipient of this expense is
- the Boy Scouts of America
  - an entomologist
  - the local banker
  - a farrier

57. Joe has 40 acres of dryland corn and 80 acres of soybeans. What are his total fixed costs?
- \$26,573
  - \$3,692
  - \$5,460
  - \$15,489
58. Using the acreages in the previous question, how many tons of potash did Joe buy?
- 3.6
  - 5.2
  - 6.8
  - 10.3
59. What were the total costs of the combine on Joe's 80 acres of soybeans?
- \$6,192
  - \$443
  - \$1,600
  - \$2,043
60. Sue's peanut yield is 3200 lbs/acre and she is able to sell her crop at \$0.26 per pound. What are Sue's returns to ORM per acre?
- \$43.24
  - \$105.69
  - \$45.27
  - \$77.83
61. An agronomist friend tells Sue that if she used 10% more fertilizer (10% more of each N, P, and K) that her yield would increase by 10%. Using the assumptions in the previous question, by how much would Sue's returns to ORM per acre change if she applied the extra 10% of fertilizer?
- \$23.75
  - \$34.66
  - \$106.74
  - \$80.89
62. What is the current rental rate for cropland in north Florida?
- \$20/acre
  - \$40/acre
  - \$65/acre
  - can't tell from the information provided
63. Jose has 80 acres of soybeans. He harvests with a small combine that takes him half an hour per acre. What are Jose's total fixed costs for the combine?
- \$1,600
  - \$3,448
  - \$1,724
  - \$1,284

64. The expense for drying and cleaning on the peanut budget is based on a yield of
- 2,000 lb/acre
  - 3,200 lb/acre
  - 3,500 lb/acre
  - can't tell from the information provided

65. What are Martha's total returns to ORM based on the following information:

Crop	Acres	Yield	Price
Dryland corn	60	60 bu/acre	\$2.25/bu
Soybeans	120	30 bu/acre	\$5.25/bu

- \$8,460
- \$16,592
- +\$643
- \$12,860

*Questions 66-71 are based on the net worth statement (or balance sheet) for the Black farm and ranch shown in Exhibit 5*

66. What was Perez' net worth at the end of 2004?
- \$2,126,431
  - \$1,172,798
  - \$1,655,331
  - \$695,901
67. What was Perez' debt-equity ratio at the end of 2004?
- 0.81
  - 1.96
  - 0.89
  - 0.03
68. How much equity did Mr. Perez have in his farm at the beginning of 2004?
- \$2,126,431
  - \$1,172,798
  - \$1,655,331
  - \$695,901
69. What was Perez' current ratio at the end of 2004?
- 0.23
  - 1.89
  - 0.89
  - 0.53

70. The current ratio is a measure of
- solvency
  - profitability
  - liquidity
  - equity
71. How much working capital does Mr. Perez have at the end of 2004?
- \$32,154
  - \$28,975
  - \$23,978
  - \$65,269

*Questions 72-77 deal with financial analysis. Each problem can be solved using the financial tables presented in Exhibits 6 and 7.*

72. What is the present value of \$500.00 to be received 5 years from now using a 12% discount rate?
- \$300.00
  - \$500.00
  - \$283.71
  - \$340.29
73. If Sarah puts \$100.00 in a savings account that pays 8% per year, how much will she have in the account at the end of 12 years?
- \$251.82
  - \$196.00
  - \$375.12
  - \$389.60
74. Dwight took out a 30-year, \$200,000 mortgage at 8% with annual payments. How much are the annual payments?
- \$6,667
  - \$8,245
  - \$10,956
  - \$17,765
75. Dwight and Sarah want to start an education savings account for little Sussie. They want to put the same amount into the account each year. The account earns 8% per year. If they want to have a total of \$150,000 fifteen years from now, how much should they put in each year?
- \$1,000
  - \$10,000
  - \$5,525
  - \$3.875
76. If you win \$20 million in the Florida lottery, you don't really get \$20 million. Instead, you get \$1 million per year for the next 20 years. Using an 8% discount factor, what is the present value of a \$20 million lottery winning?

- a. \$20 million
- b. \$9.8 million
- c. \$4.2 million
- d. \$15.6 million

77. If Ricardo puts \$2,000.00 per year into an account that earns 12% per year, how much will he have in that account at the end of 10 years?

- a. \$20,000
- b. \$32,960
- c. \$44,290
- d. \$35,100

*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 8.*

78. In 2002 Dusty bought a used tractor for \$45,000. When new, the tractor cost \$75,000. Dusty paid \$10,000 cash and borrowed the other \$35,000 from the bank. For the purposes for federal income tax, what was Dusty's basis on the tractor when he bought it?

- a. \$75,000
- b. \$10,000
- c. \$55,000
- d. \$45,000

79. In 2004 Dusty sold the tractor mentioned above. He would have to pay capital gains taxes on the sale of the tractor if

- a. selling price > (2002 basis - depreciation)
- b. selling price > salvage value
- c. selling price > (\$75,000 - depreciation)
- d. selling price < 2004 basis

80. Dusty bought 80 acres of cropland in 2002 for \$400,000. Using standard procedures, how much depreciation on the land can he claim on his 2004 taxes?

- a. zero
- b. \$60,000
- c. \$120,000
- d. \$86,400

81. In 2002 Joan bought some breeding goats for \$20,000. How much depreciation can she claim on her taxes for 2004 using the standard GDS/150% DB method?

- a. \$4,000
- b. \$3,570
- c. \$5,800
- d. \$5,100

82. In 2004 Rusty bought an imported farm tractor for \$70,000. Because it was imported, Rusty must depreciate it using the ADS straight line method. In his case, the half-year convention applies. How much depreciation can he claim on his 2004 tax return?

- a. \$7,000
- b. \$10,000
- c. \$3,500
- d. \$1,750

83. Using the assumptions of the previous question, if Rusty had purchased a domestic tractor at the same price, how much depreciation could he claim on his 2004 tax return?

- a. \$10,000
- b. \$5,000
- c. \$3,500
- d. \$7,500

**End of Part II**