

**2011 Iowa FFA Dairy Cattle Evaluation CDE Test**  
**West Union, Iowa    September 17, 2011**

Mark the best answer in the proper blank on the Scantron sheet.

**25 Objective Questions -- 2 pts. each**

1. Ketosis is a nutritional disease in dairy cows caused primarily by \_\_\_\_\_ in the diet.  
a. excess calcium    b. calcium shortage    c. excess protein    d. energy shortage
2. Dystocia refers to:  
a. calving ease    b. herd health    c. mastitis    d. energy consumption
3. At birth, which stomach area is the largest in the calf?  
a. abomasum    b. omasum    c. rumen    d. reticulum
4. Washing the udder prior to milking stimulates the release of \_\_\_\_\_ which induces milk letdown.  
a. estrogen    b. testosterone    c. adrenaline    d. oxytocin
5. Which of the following labels indicate genometrical testing?  
a. TPI    b. PTPI    c. CTPI    d. GTPI
6. Which region has the most dairy farms?  
a. Midwest    b. Northeast    c. Southeast    d. West
7. Feeding texturized calf grain rather than pelleted calf grain leads to which of the following?  
a. longer papillae in the rumen    b. higher average daily gain  
c. higher body weight    d. all of the above
8. What is the name of milk sugar?  
a. dextrose    b. lactose    c. sucrose    d. fructose
9. What term describes the removal of an animal from a herd?  
a. calving    b. colostrum    c. conception    d. culling
10. Where is oxytocin stored and released?  
a. ovarian follicle    b. corpus luteum    c. pituitary gland    d. adrenal gland
11. The first milk secreted after calving is called \_\_\_\_\_.  
a. coliform    b. collagen    c. clostridia    d. colostrum
12. Which of the following interpretation on a sire summary indicates foreign daughter information?  
a. genomic    b. international    c. mace    d. pace
13. Heritability describes the degree to which offspring resemble their parents for a certain trait. Which of the following is the most heritable trait?  
a. milk    b. udder    c. body size    d. feet legs
14. The protozoal organism cryptosporidium parvum causes an illness known to many of us as a crypto. Crypto is a common cause of what ailment in calves?  
a. pneumonia    b. mange    c. diarrhea    d. red nose

15. This substance forms in the tip of each teat when the cow is dry. It aids in sealing the teats to prevent infection in the udder.
- a. opaque
  - b. skin
  - c. mucus
  - d. keratin
16. If the following rumen content is 'depressed', fat content of milk is most likely depressed.
- a. formalin
  - b. butyric acid
  - c. acetic acid
  - d. lactic acid
17. Until how many hours old will a calf's intestine absorb the disease-fighting ingredients of colostrum?
- a. 48
  - b. 24
  - c. 12
  - d. 4
18. The time period that a cow carries a calf is called?
- a. rumination
  - b. lactation
  - c. gestation
  - d. parturition
19. "UHT" milk is pasteurized at what approximate minimum temperature in degrees Fahrenheit?
- a. 145
  - b. 161
  - c. 191
  - d. 280
20. How does a robotic milker find the teats of a cow ready to be milked?
- a. Teat sphincter sensors
  - b. Milk detection sensors
  - c. Sonomatic cell sensors
  - d. Lasers or vision cameras
21. Which component in colostrum fed during the first day of life is most critical to the health and survival of the calf?
- a. immunoglobulin
  - b. somatic cells
  - c. vitamin D
  - d. vitamin A
22. Lameness or sore feet is often a sign of what digestive disorder?
- a. retained placenta
  - b. metritis
  - c. fatty liver disease
  - d. acidosis
23. What type of feed is more of a concern for causing bloat in cattle?
- a. corn silage
  - b. brome grass hay
  - c. corn gluten meal
  - d. pastured alfalfa
24. What is the name of the process where warm milk is forced through tiny holes in order to break the fat particles into tiny pieces?
- a. pasteurization
  - b. conception
  - c. fertilization
  - d. homogenization
25. Which vitamin can carotene be substituted for?
- a. A
  - b. B
  - c. C
  - d. D



58. What is the component value of a hundredweight of milk if the farm produces 185,000 pounds of milk with the following:

Components		\$Basis Milk Value
Butterfat	4.5 %	1.639 per pound
Protein	3.68 %	4.125 per pound
Solids	5.99 %	.0531 per pound
SCC	225,000	.29 per cwt

- a.\$23.33                      b.\$23.16                      c.\$23.67                      d.\$23.93

59. You make 15% protein ration by grinding 8.7% protein corn and 43% complete protein mix. How many pounds of corn are needed to make a two ton ration?

- a.3265                      b.3379                      c.1689                      d.3548

60. A cow consumes 65 pounds of corn silage that contains 63% moisture. How many pounds of dry matter does it contain?

- a.40.95                      b.24.05                      c.23.75                      d.39.85

**Sire Evaluation Questions -- 5 pts. each**

Refer to **Appendix B** (August 2011 Holstein Association High Ranking Sire Report) to answer the following questions.

61. Which abbreviation indicates the bull was tested free of BLAD?

- a. TL                      b. TV                      c. TR                      d. TY

62. Which bull was an embryo transfer?

- a. Ramos                      b. Mainstream Manifold                      c. Morningview Levi                      d. Hartline Jayton

63. Which sire should improve udder and feet and legs?

- a. Ensenada Taboo Planet                      b. Siemers Toys Hero  
c. O-Bee Manfred Justice                      d. Crockett-Acres Otto

64. Which bull should raise the component value of fat and protein?

- a. Gran-J OMan McCormick                      b. Lotta-Hill Shottle  
c. Sandy-Valley Bolton                      d. Ensenada Taboo Planet

65. What factor has put Ensenada Taboo Planet as the highest ranking sire on this sire report?

- a. PTA-protein                      b. SCS                      c. UDC                      d. TPI

**Pedigree Questions -- 5 pts. each**

Refer to **Appendix C** (Heifer Pedigrees) to answer the following questions.

#1	Lot 2	Diamond K Legal 2969
#2	Lot 4	GR Moon Meadow Upper Cut Urbane
#3	Lot 5	Renner Farm Action Kenzie
#4	Lot 13	DP Valentino Creampuff 999

66. Which heifer was not born in 2011?

- a. 1                      b. 2                      c. 3                      d. 4

67. Which heifer has the least improvement for stature?

- a. 1                      b. 2                      c. 3                      d. 4

68. What is the name of the maternal granddam of #4?

- a. Parade Louie                      b. DP Jacinto Creampuff  
c. DP Geronimo Creampuff                      d. D & E Paramount Violet

69. Which heifer would have the most improvement in all aspects of the mammary system?

- a. 1                      b. 2                      c. 3                      d. 4

70. Which heifer's sire was not an embryo transfer?

- a. 1                      b. 2                      c. 3                      d. 4

## Please use Placing Class Card for the next three sections.

### Phase E -- Pedigree Evaluation

Refer to **Appendix C** (Heifer Pedigrees) to rank the animals based on their pedigree and indicate your ranking on the answer sheet.

<b>#1</b>	Lot 2	Diamond K Legal 2969
<b>#2</b>	Lot 4	GR Moon Meadow Upper Cut Urbane
<b>#3</b>	Lot 5	Renner Farm Action Kenzie
<b>#4</b>	Lot 13	DP Valentino Creampuff 999

### Phase F -- Sire Evaluation

You are a commercial dairy producer who wants moderate sized cows that have good, well-attached udders and sound feet and legs as these cows do best in your system. Furthermore, you prefer cows with good production and high components to cows with high production but low components. You currently have a large group of breeding age heifers that you would like to breed to the same bull with the hope of being one of the first dairy producers to have several milking daughters of the next “hot” bull. Consequently you want to use one of the following four sires who only have a genomic proof. Using **Appendix D** which sire should be your first, second third and fourth choice to use on these heifers?

Bull **#1** EMERGENCY

Bull **#2** GOLDEN BOY

Bull **#3** KAYSON

Bull **#4** PEPPER

### Phase G -- Culling Class

You milk in a tie-stall barn and want to keep a milking cow in every stall and not have to shift cows in and out to get them all milked. All dry cows are housed elsewhere. You sell high volumes of high quality milk with emphasis on reproductive efficiency. You had a first-calf heifer calve this morning and you want to cull one of the following four cows to make room for this fresh heifer. Use the attached Cow Pages (**Appendix E**) to place the cows in the order that you would cull them from your herd. The first cow you would cull should be ranked #1 and the last cow you would cull should be ranked #4.

Cow **#1** Index **6712**

Cow **#2** Index **6723**

Cow **#3** Index **6778**

Cow **#4** Index **6831**

# 2011 Iowa FFA Dairy Cattle Evaluation CDE Key

## Test Key

1. D
2. A
3. A
4. D
5. D
6. A
7. A
8. B
9. D
10. C
11. D
12. C
13. C
14. C
15. D
16. C
17. C
18. C
19. D
20. D
21. A
22. D
23. D
24. D
25. A

## DHIA Questions

51. D
52. C
53. A
54. B
55. D

## Dairy Management

56. A
57. D
58. B
59. A
60. B

## Sire Summary

61. A
62. D
63. B
64. A
65. D

## Pedigree Evaluation

66. D
67. A
68. C
69. D
70. B

## Phase E Pedigree Placing

**Placing 2 - 1 - 4 - 3**

**Cuts 4 - 1 - 8**

- 2 - Highest JPI (159), CM,NM,FM  
Highest fat, protein, 3rd highest milk
- 1- 2nd highest CM,NM,FM  
Similar milk, fat, protein to #4  
Close middle pair
- 4- Close JPI to #1  
Higher type (1.9)
- 3- Lowest JPI (35)  
Negative milk, fat, protein  
Lowest CM,NM,FM

## Phase F Sire Selection

**Placing 1 - 2 - 3 - 4**

**Cuts 2 - 5 - 7**

- 1- Smaller in stature (-.04)  
Highest UDC - (1.42) TPI (231) milk (1024)  
Highest component values Fat  
3rd FLC (.66)
- 2- Net merit highest, cheese merit highest  
2nd high TPI (221)  
2nd milk, protein, fat values  
2nd strongest component values,  
3rd TPI (179)  
3rd milk, protein, last in fat  
3rd high in NM, FM, CM  
Lowest UDC, highest FLC  
Smaller in stature (-.06)
- 4- Lowest milk, fat, protein as well as NM, FM, CM  
Largest stature (1.9)  
High UDC, low FLC  
Lowest TPI (139)

## Phase G Culling

**Placing 2 - 1 - 3 - 4**

**Cuts 1 - 7 - 4**

- 2- 91% reproductive efficiency  
Medium SCC - chronic condition
- 1- 92% reproductive efficiency  
Low SCC - One high count  
Milk records increase - stay same each year
- 3- 94% reproductive efficiency  
Lowest SCC  
2nd best average milk production, best fat  
Herdmate deviations +19 fat
- 4- 100% reproductive efficiency  
Highest average milk production  
Low SCC  
Herdmate deviations are best of group

