

## QUESTIONS FROM 2010 PA HOLSTEIN QUIZ BOWL

1. Why are freemartins generally undesirable?  
They are usually sterile
2. Why shouldn't you feed a total corn silage diet to heifers?  
They will get fat; corn is too high in energy, etc.
3. What does the suffix ET mean after the animal's name on a Holstein pedigree?  
Embryo Transfer
4. What term refers to the period of time when a cow is in milk?  
Lactation
5. What is the condition called when the rumen is distended with excess gases?  
Bloat
6. In shows, what month are the youngest senior three year olds born?  
February
7. What is the general name for a compound that kills unwanted insects?  
Pesticide or Insecticide
8. What disease in humans is a weakening of the bones through loss of calcium and other minerals?  
Osteoporosis
9. What is Pennsylvania's official state beverage?  
Milk
10. If a cow is in positive energy balance, does this mean that she is gaining, maintaining, or losing weight?  
Gaining
11. What intestinal enzyme digests lactose?  
Lactase
12. Your Holstein cow is classified 86 points. Under what category does she fall?  
Very Good
13. During the winter months when it is cold, what happens to a calf's requirement for energy?  
Increases
14. Name the disease that infects warm-blooded mammals, is fatal, and is often transmitted to cows through raccoon and skunk bites.  
Rabies
15. In general, what does a pathogen cause?  
Disease

16. What is the name of the cartoon couple that appears in Hoard's Dairyman?  
Ed and Emma
17. Cows sorting their feed can cause what metabolic disorder characterized by a drop in rumen pH?  
Acidosis
18. What hormone is released when a cow is frightened?  
Adrenaline (epinephrine)
19. Nodules on the roots of legumes help fix what chemical element?  
Nitrogen
20. To compute BAA, a cow's actual classification score is adjusted for stage of lactation and what other factor?  
Age
21. Ash is a measure of which component of a feed?  
Minerals
22. What do the letters NAAB stand for when referring to the AI industry?  
National Association of Animal Breeders
23. Calories are used to measure what property of feeds?  
Energy
24. "Saturated" fatty acids contain how many double bonds between the carbon atoms?  
None
25. Chromosomal DNA is found in which cell structure?  
Nucleus
26. Jerseys and what other U.S. dairy breed originated in the Channel Islands?  
Guernsey
27. What is it called when a cow is treated with FSH to produce more eggs?  
Superovulation
28. What is the procedure known as LTLT used for in the dairy industry?  
Pasteurization
29. What gland located near the brain stem controls appetite?  
Hypothalamus
30. PL is the measure of how long daughters of a given bull last. What do the letters PL stand for?  
Productive Life
31. Which U.S. state has the most cows?  
California

32. NDF and ADF both contain cellulose and lignin. What other structural carbohydrate is included in NDF?  
Hemicellulose
33. Electrolyte solutions are most commonly fed to which age group on a farm?  
Calves
34. In which of the four seasons do we typically see a spike in mastitis cases?  
Summer
35. Estrogen is produced by what organ in the female body?  
Ovaries (follicle)
36. If your Holstein cow scores 90 points, she must have had at least how many calvings?  
Two
37. What milk solids component makes up 5% of whole milk?  
Lactose
38. What grain represents 95% of the US feed grain supply?  
Corn
39. What does the term per capita mean?  
Per Person
40. On average, what chemical element comprises 16% of a protein molecule?  
Nitrogen
41. What enzyme digests fats?  
Lipase
42. On the 2009 PDCA Dairy Cow scorecard, rear feet and legs account for what percent?  
20%
43. W.D. Hoard founded Hoard's Dairyman in what year?  
1885
44. An extremely wide, strong cow should receive what linear classification score for strength?  
45-50
45. On what type of cell would you most likely find an acrosome?  
Sperm
46. The Hilmar Cheese Company has plants in both California and what other state?  
Texas
47. Sexed semen is recommended for use on which age group of cattle?  
Heifers
48. Straw is most likely to be a major forage source in the diets of what type of cows?  
Dry cows

49. What is the name for milk that is remaining in the udder immediately after a cow is milked?  
Residual milk
50. What occupation is shared by Billy Heath and Cybil Fisher?  
Photographer
51. Twenty-one pounds of whole milk should yield about how many pounds of butter?  
1
52. A deficiency of what fat-soluble vitamin can cause night blindness?  
Vitamin A
53. Within one week, typically a cow's daily energy balance reaches its most negative point how many weeks after calving?  
2(+ or -1)
54. On a mycotoxin report, you see a concentration listed as "ppb". What does ppb mean?  
parts per billion
55. Name the structure found on the ovary that is also referred to as a "yellow body".  
Corpus luteum
56. What compound is converted to urea by the liver and kidney?  
Ammonia (NH<sub>3</sub>)
57. What is the top county in the United States based on amount of milk marketed?  
Tulare, California
58. If a cow was successfully bred on February 10, in what month would she likely calve?  
November
59. Name the Iowa herd that purchased Snow-N-Denises Dellia and later bred the bull known as Durham.  
Regancrest (Regan family)
60. What member of the fungus family are tiny single celled plants sold alive to be included in dairy rations?  
Yeasts
61. An older cow that has a high somatic cell count on the first test of her new lactation compared to the previous year was probably infected when?  
Dry period

62. A target benchmark for calves is to double their birth weight within the first how many days of life?  
60 days
63. In what season is abortion rate in cows highest?  
Summer
64. For every pound of dry matter a cow eats, how many pounds of water should she consume?  
4-5 pounds
65. What organ produces insulin?  
Pancreas
66. What manufacturing process destroys 90 percent of BST found in milk?  
Pasteurization
67. Lactating cows drink the largest amounts of water within an hour after what occurs?  
Milking
68. Estrumate and Lutalyse are commercially available forms of what hormone?  
Prostaglandin
69. DCE is the relative percent of daughters of a given sire to have a difficult first calving. What do the letters DCE stand for?  
Daughter calving ease
70. ROPS can quickly become one of the most valuable pieces of safety equipment you can own on your farm. What do the letters ROPS stand for?  
Roll Over Protection Structure (or system)
71. In a standard Ov-Synch program, prostaglandin and what other hormone are administered?  
GnRH (gonadotropin releasing hormone)
72. What gas was found to inhibit bacterial growth and extend shelf life when injected into fluid milk and cottage cheese?  
Carbon dioxide (CO<sub>2</sub>)
73. Pennsylvania and what neighboring state each had 16 manure digesters as of late 2007, trailing only Wisconsin?  
New York

74. Starches used by rumen microbes to stimulate rumen development usually come from what type of feed fed to calves?

Grain (calf starter)

75. Excessive levels of nitrogen in feeds can lead to emission of what gas?

Ammonia

76. Limestone is added to some rations to supply which mineral?

Calcium

77. Organisms that cause what common disease in cattle can often be classified as gram positive or gram negative in an on-farm culture system?

Mastitis

78. Which milk quality count measures bacteria that grow at low temperatures and is abbreviated PI?

Preliminary Incubation Count

79. Rabies is an example of a disease that can be spread from animals to humans. What general term describes this type of disease transmission?

Zoonotic

80. If a cow with horns is bred to a homozygous dominant polled bull, what percent of the calves will have horns?

0

81. What state led the nation for butter production in 2008?

California

82. David Selner is the current Executive Director of what organization abbreviated NDS?

National Dairy Shrine

83. In what city and state does the annual Jersey Jug Futurity take place?

Louisville Kentucky

84. A stocking density of 100% would leave how many extra stalls in a barn?

0

85. What year was the Holstein Distinguished Junior Member program started?

1922

86. DSB is the relative percent of daughters of a given sire to have a dead calf. What do the letters DSB stand for?

Daughter Stillbirth

87. The first Holstein cow to produce 50,000 pound of milk in a year was from what state?  
Pennsylvania
88. What is the name of the bacterium that causes Johne's Disease?  
Mycobacterium paratuberculosis
89. What is the most common source of botulism in herds in California?  
Dead animals
90. The skin tent test to measure skin elasticity is used to determine what health condition?  
Dehydration/hydration
91. Name the maternal brother to Regancrest Elton Durham who has sired numerous All American nominees.  
Regancrest Dundee
92. What would a linear score of "50" for udder depth signify?  
A very shallow udder (held extremely high above the hocks)
93. What happens to pH during silage fermentation?  
It decreases
94. Where are the suspensory ligaments of the udder suspended from?  
Pelvis (and body wall)
95. Where are the immunoglobulins in colostrums absorbed in the newborn calf?  
Small intestine
96. Which animal rights organization is abbreviated HSUS?  
Humane Society of the United States
97. NMPF and IDFA worked with producers to create the Innovation Center for U.S. Dairy. What do the letters IDFA stand for?  
International Dairy Foods Association
98. U.S. dairy farmers partnered with which pizza chain to launch American Legend's, a new product line featuring 6 pizzas with 40% more cheese?  
Dominos
99. In 2007 Michigan introduced a mandatory electronic animal ID system to control the spread of which major disease?  
Tuberculosis (TB)

100. What feed property does a kernel processor on a corn harvester improve?  
Digestibility
101. What is the proper term or technical term for extra teats?  
Supernumerary teats
102. A 3 year old cow who receives the breed average score for her age group will have a BAA of what percent?  
100
103. The primary cause of laminitis is absorption of large amounts of which acid?  
Lactic
104. What state was the first state to outlaw tail docking?  
California
105. Most of the probiotic bacteria currently found in yogurt are species of which bacteria?  
Lactobacillus
106. When growing alfalfa, what nutrient is removed from the ground in the greatest amount?  
Potassium (K)
107. Coccidia belong to what category of disease-causing organism?  
Protozoa
108. Ulcers in calves mainly occur in which stomach compartment?  
Abomasum
109. What two word term that measures how full barns are can be calculated by dividing number of cows by number of stalls?  
Stocking Density
110. On the 2009 PDCA Dairy Cow Scorecard, what item is worth 8 points under the Dairy Strength category?  
Ribs
111. Why should fish meal be introduced slowly into your cow's ration?  
Bad odor (palatability)
112. What type of vegetable is a common late-season grazing forage crop in many countries but not in the United States?  
Turnips

113. Because of tough economic times affecting pizza delivery chains, sales of what pizza type are up 5%?  
Frozen
114. Garlic oil, cinnamaldehyde, eugenol, vanillin, and limonene are examples of what feed additive abbreviated EO?  
Essential Oils
115. Which specific chromosome has an allele that is correlated with calving difficulty in the Holstein breed?  
Chromosome 18
116. Mycoplasmas lack what cell structure?  
Cell wall
117. What pituitary hormone is known as the milk formation hormone?  
Prolactin
118. Of  $\frac{1}{4}$ ,  $\frac{1}{3}$ , or  $\frac{1}{2}$ , what fraction of U.S. dairy herds milk three times a day?  
 $\frac{1}{3}$
119. According to USDA predictions, about what fraction of the 2009 corn crop was used for ethanol production?  
 $\frac{1}{3}$  (32%)
120. HBO produced a movie starring Clare Danes that told the story of what autistic animal behaviorist?  
Temple Grandin
121. Which Proximate Analysis category includes simple sugars?  
Nitrogen Free Extract (NFE)
122. The roll and toggle method is sometimes used instead of surgery to correct what condition?  
Displaced abomasums
123. What is the highest grade of butter sold in the United States?  
Grade AA
124. Wind Drift Countess Nora, a Pennsylvania-owned cow, was the first to receive what designation at the World Dairy Expo?  
Supreme Champion

125. The Sire Evaluation for Type classification option is usually requested by what organizations?  
Bull studs
126. What process abbreviated RO is used to concentrate milk solids by the removal of water?  
Reverse osmosis
127. Prussic acid is often formed in sorghum that experiences what kind of damage?  
Frost
128. The Hokkaido Holstein Show is held in what country?  
Japan