

## QUESTIONS FROM 2007 PA HOLSTEIN QUIZ BOWL

1. On a dairy farm, what do the terms carousel, herringbone and parallel refer to?

**Types or designs of milking parlors or milking centers**

2. What is another name for a calf's father?

**Sire**

3. Milk that has not been processed in any way is described by what term?

**Raw**

4. Sexed semen can produce up to 90% heifers, because the semen contains mainly which sex chromosome?

**X**

5. What is the primary protein in milk?

**Casein**

6. What is the proper term for the reproductive condition abbreviated RP that occurs after calving?

**Retained placenta**

7. What is a group of cells working together to carry out a certain function called?

**Tissue**

8. What element needs to be excluded from silage so that fermentation occurs and the silage is preserved correctly?

**Oxygen**

9. On the Dairy Cow Unified Score Card, hocks fall under which category?

**Feet and Legs**

10. Fermentation primarily occurs in which stomach compartment of the cow?

**Rumen**

11. The main component of milk is what?

**Water**

12. Why do we apply Kamar devices on certain dairy cows?

**To help detect heat (estrus)**

13. What is formed when glucose and galactose combine?

**Lactose**

14. What term is given to substances that have a pH of 9?

**Basic or Alkaline**

15. Your Holstein cow is classified 85 points. Under what final score category does she fall?

**Very Good**

16. Which state has the most dairy farms in the U.S.?

**Wisconsin**

17. Which stomach compartment is largest in a newborn calf?

**Abomasum**

18. Name the enzyme that breaks down fats.

**Lipase**

19. What vitamin is needed so the blood can clot after an injury?

**Vitamin K**

20. How many different breeds show at the World Dairy Expo?

**7**

21. Where is most phosphorus stored in the body?

**Bone**

22. In the first month after calving, what happens to the body weight of a lactating dairy cow?

**The cow loses weight**

23. What disease in humans is a weakening of the bones through loss of calcium and other minerals?

**Osteoporosis**

24. In which of the four seasons are milk products in greatest supply?

**Spring**

25. When a baby calf has scours, not enough fluids are absorbed from the intestinal tract. What problem does this cause?

**Dehydration**

26. What do we determine when we multiply the nitrogen fraction of a feed by the factor 6.25?

**(Crude) protein percent**

27. What is the common name of the substances used to maintain rumen pH?

**Buffers**

28. What are the two main nutrient categories that supply energy to cows and heifers?

**Carbohydrates and fats**

29. What is the chemical abbreviation for iron?

**Fe**

30. Lutalyse and Estrumate are products that contain which hormone?

**Prostaglandin**

31. If the “effective fiber” level of a ration is too low, what happens to the milk fat test?

**Decreases**

32. How many ovaries are in the female reproductive tract?

**2**

33. A deficiency of what fat-soluble vitamin can cause night blindness?

**Vitamin A**

34. What is the general name for a compound that kills unwanted weeds?

**Herbicide**

35. What type of immunity occurs when antibodies are transferred from one animal to another?

**Passive**

36. What buffering compound found in baking soda is routinely added to dairy rations to help prevent acidosis?

**Sodium bicarbonate**

37. What is the name for clusters of milk secreting cells in the udder of a dairy cow?

**Alveoli**

38. The science dealing with hormones and their secretions is called what?

**Endocrinology**

39. What is the name of the structure that lies between the mouth and the esophagus that serves to direct food and air?

**Pharynx**

40. On what day must a heifer be born to be the oldest possible animal in the winter yearling heifer classes?

**Dec. 1<sup>st</sup>**

41. Bypass fat escapes saturation in what main stomach compartment?

**Rumen**

42. What is the lowest score that can be assigned for an individual Holstein linear-type trait?

**1**

43. Which vitamin enhances the body's ability to absorb calcium?

**Vitamin D**

44. What is the term used to describe a period of increased growth rate in heifers that follows a nutrient restriction?

**Compensatory growth (or compensatory gain)**

45. Rumen undegradable protein is also known as what?

**Bypass protein**

46. What abbreviation indicates 100 pounds of milk?

**cwt.**

47. Calories are used to measure what property of feeds?

**Energy**

48. What hormone is released by the corpus luteum and supports pregnancy?

**Progesterone**

49. What vitamin is generally supplemented with selenium injections?

**Vitamin E**

50. A goiter is an enlargement of what gland?

**Thyroid**

51. Which stomach compartment in a cow has a mucous covered lining to protect it from the acid that is secreted?

**Abomasum**

52. What type of blood vessels carry the blood from the body back toward the heart?

**Veins**

53. New U.S. dietary guidelines recommend how many servings per day of dairy products?

**Three**

54. In what city and state is the National 4-H Dairy Cattle Judging Contest held?

**Madison, WI**

55. In what three months could a heifer be born to show in the spring yearling class?

**March, April, May**

56. If your cow is 63 inches tall, what linear score should she receive for stature?

**50**

57. NDF and ADF both contain cellulose and lignin. What other structural carbohydrate is included in NDF?

**Hemicellulose**

58. In calculating Holstein BAA values, classification scores are adjusted for stage of lactation and what other factor?

**Age**

59. What linear type trait is measured relative to the udder floor's distance from the hock?

**Udder depth**

60. In the Hoards Dairyman judging contest, the Holstein class always appears in what specific issue date?

**January 25**

61. "Saturated" fatty acids contain how many double bonds between carbon atoms?

**None**

62. Manure digestors convert what gas into electricity?

**Methane**

63. What is the percent nitrogen in a feed that contains 18.75% crude protein?

**3%**

64. On what part of the corn plant would you find the starch line?

**Kernel**

65. What New Zealand dairy co-op is among the largest in the world?

**Fonterra**

66. Cookie meal, beet pulp, and candy waste are examples of what type of feed?

**By-product**

67. The world's largest agricultural exhibition takes place each February in what California town?

**Tulare**

68. Which reproductive technology is abbreviated IVF?

**In-vitro fertilization**

69. Corn distiller's grains are a very good source of what sulfur-containing amino acid?

**Methionine**

70. What is the two-word term used to describe heifers sired by the same bull and born to the same cow at different times?

**Full sisters or full siblings**

71. A Holstein cow is scored Good. She must have scored no less than how many points?

**75**

72. Cows sorting their feed can cause what metabolic disorder characterized by a drop in rumen pH?

**Acidosis**

73. Amylase and sucrase are examples of what protein compounds that aid in digestion?

**Enzymes**

74. Comestar Laurie Sheik had a son that sired at least seven different national Grand Champions worldwide. Name him.

**Comestar Leader**

75. What disease, which results in abortion in cows, has been claimed to be transmitted by dogs?

**Neospora**

76. Oxytocin is known as the milk let-down hormone. Name one other function of oxytocin.

**Involved in CL regression, involved in calving, and uterine muscle contraction.**

77. Incandescent, halogen, and mercury vapor are all types of what dairy farm equipment?

**Lights/lighting**

78. What organization is responsible for the Show Ring Code of Ethics?

**Purebred Dairy Cattle Association (PDCA)**

79. What is the name of the process where milk secreting tissue regresses after a cow is turned dry?

**Involution**

80. What soybean disease is characterized by lesions on the plants and was spread to the United States from Asia?

**Soybean rust**

81. Which field of science deals with the study of insects?

**Entomology**

82. What is the largest dairy cooperative in the U.S.?

**Dairy Farmers of America (DFA)**

83. What is the most common form of NPN fed to cows?

**Urea**

84. Pneumonia is a disease of which organ system?

**Respiratory**

85. Adding monensin to a ration increases the production of which VFA in the rumen?

**Propionic (propionate)**

86. Milking Shorthorns replaced what breed in the 2007 Hoard's Dairyman Judging Contest?

**Ayrshire**

87. The Horizon Organic milk brand is owned by what food processing company?

**Dean's Foods**

88. Which Holstein linear classification trait is abbreviated RA?

**Rump angle**

89. In discussing breeds, what term is given to those breeds such as milking Shorthorns developed for both their milk and meat producing abilities?

**Dual purpose**

90. Barrel is included under which major breakdown category on the PDCA Unified Dairy Scorecard?

**Body capacity**

91. The majority of antibiotics used in dairy cattle are for the treatment of what disease?

**Mastitis**

92. Carnation Homestead Daisy Madcap was the first Holstein to produce how many pounds of butterfat in a single lactation?

**1500**

93. During classification, if your cow scores 80% in Dairy Strength, how many points does this contribute to her final score?

**16**

94. What trait abbreviated DPR is included in the Net Merit and TPI formulas?

**Daughter pregnancy rate**

95. Name the device that registers the motion of cows and indicates increased activity levels when they are in estrus.

**Pedometer**

96. Which Proximate Analysis category includes the mineral matter present in feed?

**Ash**

97. What is the name of the scientific publication that is published by the American Dairy Science Association?

**Journal of Dairy Science**

98. According to the Journal of Dairy Science, robotically milked cows produced less of which hormone which interferes with milk let down?

**Adrenaline (epinephrine)**

99. How many pounds of nitrogen are contained in 200 pounds of crude protein?

**32 pounds**

100. Which hormone is produced by the pancreas and promotes mammary growth and cell division?

**Insulin**

101. Which state has the slogan "America's Dairyland" on its license plate?

**Wisconsin**

102. If your herd's heat detection rate is 30%, and your herd's conception rate is 40%, what is your herd's pregnancy rate?

**12%**

103. What mineral is abbreviated Co?

**Cobalt**

104. Damage to which organ will often increase the amount of time that antibiotics stay in a cow's system?

**Liver**

105. Cotyledons join with caruncles from the uterus to form what structures?

**Placentomes**

106. Who is responsible for paying Holstein U.S.A. transfer fees in a private sale?

**Seller**

107. During which lactation are cows the most persistent in milk production?

**First lactation**

108. What global embryo transfer organization is abbreviated IETS?

**International Embryo Transfer Society**

109. What is the piece of equipment called that divides solid manure components from liquid?

**Manure separator**

110. What linear classification trait is measured as inches between bottom of the vulva and the top of the milk secreting tissue?

**Rear udder height**

111. How many carbon atoms does butyric acid have?

**Four**

112. There has been a rise in the price of corn due to the construction of what type of operations that heavily depend on corn?

**Ethanol (alternative fuel)**

113. What type of credits can farmers buy through the Chicago Climate Exchange that certify reduction in greenhouse gas emissions?

**Carbon credits**

114. The practice of entering a milk futures contract to guarantee a milk price is known as what?

**Hedging**

115. What is the name for milk that remains in the udder following the completion of milking?

**Residual milk**

116. What California company has the largest single-site cheese operation in the world?

**Hilmar**

117. What are the functions of the feed additives sodium bicarbonate and magnesium oxide?

**Buffers**

118. A high level of milk progesterone is associated with what pregnancy status of a cow?

**Cow is pregnant**

119. About 98% of the milk produced in the U.S. is what grade?

**Grade A**

120. Who was the first bull to sire 10,000 registered sons?

**Round-Oak Rag Apple Elevation**

121. If a CVM carrier bull is mated to a non-carrier cow, what is the probability that the offspring will be a CVM carrier?

**50%**

122. Most Holsteins in the United States today trace back to animals imported in the 1800's by which New York man?

**Gerrit Miller**

123. What disease is carried by some free-roaming bison in Yellowstone National Park has led to increased monitoring of cattle in that area?

**Brucellosis**

124. What do the letters PPD stand for when referring to milk prices?

**Producer Price Differential**

125. What secretes the cellulose enzyme in ruminants?

**Rumen microbes**

126. Which volatile fatty acid is most involved in gluconeogenesis?

**Propionate (propionic)**

127. Which component of Net Merit calculations is a measure of longevity?

**Productive Life**

128. Name the first cow of any breed to have a lifetime production total of 400,000 pounds of milk with 18,000 pounds of fat.

**Breezewood Patsy Bar Pontiac**

129. Twenty-four pounds of whole milk should yield about how many pounds of ice cream?

**2**

130. Lipoproteins transport fatty acids from what organ to other body tissues?

**Liver**

131. What mineral in fertilizer is sometimes referred to as potash?

**Potassium**

132. DCAD is important to evaluate rations for transition cows. What do the letters DCAS stand for?

**Dietary cation-anion difference**

133. For a cow to receive a 2 E designation, she must be at least how many years old?

**6 years**

134. What breed tends to have the lowest levels of antibodies in its colostrum?

**Holsteins**

135. Autotoxicity is most often a concern with which legume?

**Alfalfa**

136. What is the main acid secreted by the abomasums?

**Hydrochloric**

137. What hormone is the first given in the Ovsynch protocol?

**GnRH**

138. What is the two-word name given to the government's power to purchase private property and put it to public use?

**Eminent domain**

139. Milking machine liners made from what material may last as long as 6000 milkings?

**Silicone**

140. Glucagon helps control metabolic balance in cows. Which organ produces glucagon?

**Pancreas**

141. What type of business integration has become increasingly popular in the poultry and swine industries?

**Vertical**

142. Phenotype is defined as the combined effect of genetics and what other component?

**Environment**

143. What do the letters RF stand for in the acronym RFID?

**Radio frequency**

144. What often-limiting amino acid is a particular concern when feeding distiller's grains?

**Lysine**

145. Yeasts products' living cell concentrations are measured in cfu's. What do the letters cfu stand for?

**Colony forming units**

146. The CME is a place where butter and cheese get sold on the open market. What do the letters CME stand for?

**Chicago Mercantile Exchange**

147. In classified milk pricing, which class is listed as milk used to make butter?

**Class IV**

148. Name the early form of production testing that was abbreviated A.R.

**Advanced Registry**

149. When referring to sire summary information, what do the letters YD stand for?

**Yield Deviation**

150. Name the two-word term for the measurement used to calculate the pounds of milk produced per pound of dry matter consumed.

**Feed efficiency**

151. What by-product of beer production is fed to dairy cattle?

**Brewer's grain**

152. What is the desirable ratio of lysine to methionine in the ration of lactating cows?

**3:1**

153. What is the name of the DNA testing division of Merial?

**Igenity**

154. What university is operating the nation's first university organic dairy?

**Univ. of New Hampshire**

