

# Holstein Foundation

## 2021 Dairy Bowl

### Practice Questions

1. What part of the cow is ideally described as lean, incurving to flat and wide apart from the rear?

Thighs

2. Excessive rates of pneumonia in dairy herds are not typically due to cold weather or drafts, but often due to what?

Inadequate ventilation

3. When a cow is stressed, how many minutes will it take for her heartbeat to slow down?

20 to 30 minutes

4. Who is the President of Holstein Association USA?

Corey Geiger

5. In cows, sleep is divided into drowsing, nonrapid eye movement and what else?

Rapid eye movement (REM)

6. Why is a rapid pH drop during forage harvest and storage desired?

Maximizes dry matter retention and minimizes spoilage

7. When setting goals and ensuring compliance with our standard operating procedures, we should use the SMART acronym. What does the M stand for?

Measurable

8. What substance in Guernsey milk gives it a golden yellow color?

Beta carotene

9. What is the name of the Holstein Association USA exclusive classified section that provides you with a simple and affordable space to help connect Registered Holstein breeders looking for quality genetics?

Holstein Marketplace

10. Cows spend what percent of their day drowsing or in a quiet wakefulness?

33%

11. Feeding proper rations during the summer is important for both cow comfort and maintaining milk production. Which nutrient is most important during the summer months?

Water

12. At what Fahrenheit temperature does silage become caramelized or heat damaged?

120 degrees F (+/- 5)

13. What is the name of the color pattern that refers to an animal who is born red and then slowly turns black at a young age?

Black-red

14. When feeding cottonseed, what is the recommended maximum pounds per day for cows?

6 - 8 pounds

15. What is remastication?

Process of chewing the food again of cud chewing

16. At least what percentage of Holstein cows with an RHA of 87% or higher must bear the owner's prefix to qualify for a Holstein Association USA PBR award?

75%

17. In regard to animal welfare organizations, what do the initials PETA stand for?

People for the Ethical Treatment of Animals

18. What is the first compartment of the stomach called?

Rumen

19. What is another term for bypass protein that excludes unavailable or heat-damaged protein?

Protected protein, rumen undegraded protein or undegraded intake protein

20. Body energy and nutrient reserves can be replenished with most ease during which stage of lactation?

Late lactation

21. Cows that consume a grass-based diet have higher levels of what cancer-fighting agent in their milk?

Conjugated linoleic acid

22. What toxin is a common problem usually associated with feeding large amounts of cottonseed?

Gossypol

23. What body system is mainly affected when an animal is afflicted with BLAD?

Immune system

24. Chromosomes are found in what part of the cell?

Nucleus

25. Injecting cows with a hormonal form of what vitamin before calving may reduce the incidence of milk fever?

Vitamin D

26. Molds that contaminate drought-stressed corn can produce what toxic compound that appears in milk if fed to cows at high enough levels?

Aflatoxin

27. If properly fed to dairy cattle, urea supplies a readily available source of what element?

Nitrogen

28. What is it called when a cow is in heat?

Estrus

29. What is dystocia?

Difficult or obstructed calving

30. In a genetics program, what do the initials PTAT stand for?

Predicted Transmitting Ability for Type

31. The SPC test is used to measure the number of mesophilic organisms in milk to determine whether state regulatory standards are met. What do the initials SPC stand for?

Standard Plate Count

32. Which reproductive condition is a result of the fetal membranes remaining within the uterus for an extended period after calving?

Retained placenta or retained fetal membranes

33. What is the purpose of the hormone oxytocin?

Allow milk letdown

34. What is the name of the 6,900-pound mahogany stone that commemorated World Dairy Expo's 50th anniversary?

Miss Madison

35. What is the name of the oldest known cheese?

Gorgonzola

36. Coffee is rich in antioxidants and when consumed with milk, it is an excellent source of what?

Calcium

37. One criterion used to measure the quality of feedstuffs is percent TDN. What do the initials TDN stand for?

Total Digestible Nutrients

38. The proportion of superiority or inferiority in performance of a parent which is transmitted directly to its offspring is indicated by what term?

Heritability

39. What year was the Holstein-Friesian Association of America organized?

1885

40. Name three color patterns which make animals ineligible for registration in the Holstein Association USA herdbook.

Solid white, solid black, solid red or roan

41. The Holstein Association's SET program helps bull owners attain a type proof on their progeny test bulls. What do the initials SET stand for?

Sire Evaluation for Type

42. Which cow was the first to sell in public auction for over one million dollars?

Allendairy Glamourous Ivy

43. What organization has as its primary objective: to maintain a historical record of outstanding breeding herds and to promote the advancement of the dairy industry?

National Dairy Shrine

44. Information about which side of the family is shown on the bottom half of the pedigree?

Maternal side (dam or mother's ancestry)

45. How does a milking machine remove milk from a cow?

Creates vacuum at teat end that overcomes teat end muscles and "sucks" milk from cow's teats

46. How can people get infected with tuberculosis?

Drinking unpasteurized milk from infected cows or contaminated water

47. What is the zona pellucida?

Gelatin-like capsule surrounding the ovum or egg

48. A second or later lactation cow produces half of her total lactation production in approximately how many days after calving?

120 days (+/-10)

49. Name the three components of the cell wall of forages.

Cellulose, hemicellulose, and lignin

50. Which gland in the cow is responsible for mobilizing calcium from the bones?

Parathyroid gland

51. What do the initials bST stand for?

Bovine somatotropin

52. What are the three Es that can help improve milk quality?

Equipment, employees & environment

53. What three things grow in wet forages that are exposed to air?

Molds, fungi, bacteria, or yeast

54. Why should a teat dip be used after milking?

To reduce or prevent udder infections

55. Why is colostrum important to newborn calves?

Helps build the calf's immune system or antibodies

56. What energy source do bacteria use to produce acid for silage fermentation?

Sugar (carbohydrates)

57. What is subclinical mastitis?

Infection of udder that is not visible

58. Mange is contagious and tends to occur in dairy cattle housed in close proximity, especially during what season?

Fall or winter

59. What udder condition appears as swelling due to an excessive accumulation of fluids between the cells of the mammary gland tissue just under the skin?

Edema

60. What term is used to define an internal or environmental stimulus that initiates an adaptive change in an animal?

Animal stress (herd stress)

61. Milk is produced by groups of what special secretory cells?

Alveoli

62. If a cow has an interdigital foot infection, where is it located?

Between the toes

63. Distillers' grain is added to a cow's ration as a source of what?

Protein

64. Once a straw of semen has been thawed it should be used to inseminate a cow within how many minutes?

10 to 15 minutes

65. What should the moisture content percent be for a compost mixture?  
50 to 60%
66. What does a cryoscope measure to determine if water has been added to milk?  
Freezing point of milk
67. What term is used to describe substances that have low pH values?  
Acidic
68. At what approximate age does a calf have a fully developed rumen?  
3 - 4 months
69. Name the fat-soluble vitamins.  
A, D, E and K
70. What is the common name for calf diarrhea?  
Scours
71. In udder health management, what is withdrawal time?  
Time required after administration of a drug to a dairy cow needed to assure that drug residues in the marketable milk is below a determined maximum residue limit
72. What is the optimal Fahrenheit temperature for animal composting?  
110 to 150 degrees F
73. What is metritis?  
Uterine infection or inflammation
74. How do cows effectively lose body heat during hot weather?  
Sweating or panting
75. Adding vitamin E by injection or supplementing a cow's diet has been found to reduce mastitis incidence. What other substance works with vitamin E to improve immunity?  
Selenium
76. Where is the streak canal located on a cow?  
Her teat

77. In dry weather, why is alfalfa able to delay drought damage?

Deep root system

78. What is the common name for nitrogen dioxide found in recently filled silos?

Brown gas

79. What city and state is the Premier National Junior Holstein Show held in?

Harrisburg, PA

80. What type of injection may include a modified live virus?

Vaccination

81. Soybean meal generally is added to dairy rations to supply what major nutrient?

Protein

82. In which specific organ do follicular and luteal cysts occur?

Ovaries

83. What muscle keeps the teat end closed and helps prevent bacteria from entering the udder?

Sphincter muscle

84. Approximately how many gallons of blood pass through the udder for each gallon of milk produced?

400 to 500 gallons

85. How many permanent teeth does a mature dairy cow have?

32 teeth

86. What name is given to the surrogate mother in embryo transfer work?

Recipient

87. When you mate two purebred animals of different breeds, what is it called?

Crossbreeding

88. Which basic nutrient group provides the cow's major source of energy?

Carbohydrates



89. Who first wrote "The cow is the foster mother of the human race"?
- W. D. Hoard
90. What term is used to describe an infertile heifer born twin to a bull?
- Freemartin
91. Which disease stopped the importation of cattle from Europe in 1905?
- Hoof and mouth disease
92. What does the word gestation mean?
- Time mother carries young (calf)
93. What are animals born without horn buttons called?
- Polled
94. Name two organs in the cow's body that undergo normal involution.
- Mammary gland (udder) and uterus
95. Which hormone is produced by the pancreas and promotes mammary cell growth and cell division?
- Insulin
96. In a milking system, what term is used to indicate the time the inflation is expanded compared to the time it is collapsed?
- Pulsation ratio
97. A cow is scored Good Plus. What is the range of points for that division?
- 80 - 84 points
98. What is the first part of the small intestine called?
- Duodenum
99. What part of the corn plant has the highest nitrate level?
- Bottom of the stalk
100. What type of feed additives are sodium bicarbonate and magnesium oxide?
- Buffers