

**HOLSTEIN FOUNDATION  
AYRSHIRE QUIZ BOWL  
2021 PRACTICE QUESTIONS**

1. Which type of feedstuff produces the most heat during digestion?

Forages

2. What is the disease in dairy calves that is highly contagious, causing inflammation and ulceration of the eye?

Pikeye

3. What is the name of the hormone that stimulates the incorporation of glucose, amino acids and fatty acids into body tissue?

Insulin

4. What term is known as the powerhouse of the cell?

Mitochondria

5. Where is the first location fat will be deposited on a cow's body?

Around internal organs

6. In herd health, what disease do the initials BLV stand for?

Bovine Leukosis Virus

7. Cheese should be stored at what temperature?

35 to 45 degrees F

8. Silage samples should be taken from what two spots in a bunker silo?

Face and further inside the pile

9. What step in the milking preparation routine starts the release of oxytocin?

Forestripping

10. What is the standard measurement for silage inoculants?

CFU or Colony-Forming units

11. Feeding a supplement of what mineral has shown to reduce the chance of mastitis infections?

Zinc

12. What is the most effective method of distinguishing between luteal and follicular cysts?

Ultrasound

13. What two soil nutrients are major concerns in drainage water pollution?

Nitrogen and phosphorus

14. How many straws of semen can be thawed using one pint of water without compromising semen quality?

4 to 5 straws

15. What substance in the cow's teat canal protects against bacterial infection?

Keratin

16. What element has been found to eliminate toxicity symptoms in high-aluminum soils?

Boron

17. What is the least digestible part of fiber?

Acid detergent fiber

18. Most animals, including cows and humans, have how many genes for each trait?

Two genes

19. Prostaglandins will only work if what ovarian structure is present?

Corpus luteum

20. What factor plays the biggest role in a cow's calving interval?

Management

21. What is the natural precursor of vitamin A?

Beta-carotene

22. Rations are supplemented with niacin to help prevent what condition?

Ketosis

23. What term is given to the presence of horseshoe shaped rings around the teat?

Teat-end lesions

24. What is it called when a cow's udder has poor blood circulation and results in extreme congestion?

Edema

25. When is the best time to treat subclinical mastitis?

During the dry period

26. What state was the first to have a milk recording program?

Michigan

27. What color is nitrogen dioxide?

Reddish brown

28. How long after filling a silo are the gases most dangerous?

12 to 72 hours

29. What is the world's biggest dairy company?

Nestle

30. Agronomists once recommended counting alfalfa plants to predict yield potential, but recently experts suggest counting what instead?

Stems

31. When temperatures drop below the thermal neutral zone, energy used for growth and immune function is now used for what?

Maintenance

32. What term defines a legal entity that allows you to hold and manage assets?

Trust

33. A feed used with another to improve nutritive balance, and intended to be further diluted and mixed to produce a supplement or a complete feed is known as what?

Concentrate

34. What are the mineral nutrients required by animals in micro amounts called?

Trace minerals

35. The afterbirth normally should be expelled within how many hours after a cow calves?

2 to 6 hours

36. What nutrient is important for growth of an animal as well as for milk production?

Protein

37. What mineral is needed for healthy strong bones and is found in large quantities in milk?

Calcium

38. What is by far the most important disease syndrome of baby calves?

Scours

39. What feed additive is used to improve taste and reduce dustiness?

Molasses

40. Forages cut and chopped in the field and fed directly to livestock are known as what?

Green chop

41. What is the term used for the positive effects that result when two purebred animals of different breeds are crossed, creating a crossbred?

Hybrid vigor

42. What is the indigestible component of forages called?

Lignin

43. What has the greatest effect on nutritive value of forages?

Maturity

44. When does a dairy cow have the highest demand for water?

After milking or feeding

45. What will improve alfalfa yields on acid soils more than any other single management practice?

Liming

46. With the exception of very warm and humid weather, how many inches of silage should be removed from the bunker daily to maintain high feed quality?

6 to 12 inches

47. What lameness problem can be seen by swelling, foul odor, and redness between the claws?

Foot rot

48. What forms when the sperm and egg unite?

Zygote or fertilized egg

49. What off-flavor in milk tastes cardboardy?

Oxidized

50. In regards to crops, what does SCS stand for?

Soil Conservation Service

51. What is hailed as the premier bedding choice for udder health and cow comfort?

Sand

52. What are the two most common types of flies on a dairy?

House and stable flies

53. Fevers develop how many hours before other clinical signs of common fresh-cow problems?

24 to 36 hours

54. What term describes the physical condition of soil particles, moisture level, drainage and biological activity?

Tilth

55. What by-product feed is the result of the production of corn sweetener and corn starch?

Corn gluten meal or feed

56. Name the pathogen associated most frequently with foodborne disease.

Salmonella

57. How long should one ton of fresh silage be packed for?

1 to 3 minutes

58. Milking equipment wash water temperature should be at what degree at the start of washing?

155 to 170 degrees F

59. In regards to equipment, what do the initials ROPS stand for?

Roll Over Protective Structures

60. How much water space should be provided for every 15 to 20 cows?

2 feet of tank space

61. In regards to feed, what do the initials TLC stand for?

Theoretical length of cut

62. Foliar diseases which reduce a plant's photosynthetic capacity affect which part of the plant?

Leaf

63. On an average, cows have a flight zone of how many feet?

5 feet

64. How much uninterrupted growth does an alfalfa plant need prior to frost to prepare itself for winter?

6 weeks

65. Soybeans contain what percent protein?

34 to 40%

66. Nitrogen found on farms in what form has the greatest impact on the environment?

Urine

67. How many days are recommended to leave the silo or bunker closed after filling for optimum silage quality?

14 to 21 days

68. What can dandelions in alfalfa indicate?

Poor stand

69. What term is given to the animal equivalent of an autopsy?

Necropsy

70. What is the term for the fetal membrane which immediately surrounds the developing calf?

Amnion

71. Cows spend how many hours per day lying down?

10 to 14 hours

72. What is the process called that consists of compressing rectangular hay bales to about one third of their original volume?

Densifying

73. What term is given to a cow that can not rise to her feet using her own strength?

Downer

74. What is the major air pollutant emitted by dairy farms?

Ammonia

75. What is the biggest problem during milking machine attachment?

Letting in too much air

76. What one single factor affects the packing performance and densities of bunker silos?

Axle weight

77. Cows with swollen feet can reduce their rumination by how many hours per day?

2 hours

78. A rule of thumb when thawing semen, is to thaw only as many straws as you can use in how many minutes?

10 to 15 minutes

79. The percentage of cows detected in heat is affected by numerous factors. The duration EWP is one factor. What do the initials EWP stand for?

Elective Waiting Period

80. When it is cold outside, milk replacer should not be served below what degree?

101.5 degrees F

81. Kernel processors that roll corn silage improve the availability of what?

Starch

82. A bypass protein is a protein source that avoids breakdown in which stomach compartment?

Rumen

83. What is defined as the time from first tactical interaction, or the start of stimulation, to milking unit attachment?

Lag or prep time

84. The process of identification using polymerase chain reaction (PCR) of the healthy milk microbiota is called what?

Metagenomics

85. Acid degree values are a measure of what?

Rancidity

86. What date is National Cheese Curd day?

October 15th

87. In regards to global warming, what do the initials GGE stand for?

Greenhouse Gas Emissions

88. Foot wart research cites three major risk factors: environment, management and what else?

Bacteria

89. What organization is charged with evaluating genetic traits of U.S. dairy cattle?

Animal Improvement Programs Laboratory

90. What award is presented at World Dairy Expo to one young exhibitor who displays exemplary fitting and showmanship skills?

Merle Howard Award

91. What are the two most common internal parasites?

Intestinal roundworms and lungworms

92. How do bacterial pathogens that cause mastitis infections enter the udder?

Through the teat canal

93. When evaluating calves for dehydration normal gums should be damp and what color?

Pink

94. What is the optimum pH level of the rumen when it has an adequate fiber mat and when there are healthy populations of rumen microbes?

6.0 to 6.3 pH

95. What term describes fraternal twins born to a dairy cow?

Dizygous

96. Corn distillers' grains are a good source of what amino acid?

Methionine

97. Milk in plastic jugs can have oxidized flavors. What causes this off-flavor?

Sunlight or fluorescent light

98. What are the first signs of alfalfa weevil damage?

Tiny pinholes in leaves at the top of plant

99. Active immunity is the type of immunity given to cattle by what method?

Vaccines

100. What term describes the test that measures the amount of dirt in milk?

Sediment test