

**HOLSTEIN FOUNDATION  
AYRSHIRE QUIZ BOWL  
2023 PRACTICE QUESTIONS**

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

Late lactation

2. In dairy cattle reproduction, what do the letters A.I. stand for?

Artificial Insemination

3. What is the average duration a cow in heat will stand to be mounted?

4 to 6 seconds

4. What generally happens to a cow's body weight during the first 90 days of her lactation?

Decreases

5. How many stalls are there in a double-8 herringbone parlor?

16 stalls

6. On average, within 3 days, how long is the cow's estrus cycle?

21 days

7. When posing a cow in a show, how should the rear legs be set?

Foot closest to the judge slightly forward

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

Maternal side

9. What part of the back lies between the withers and the middle of the back?

Chine

10. Which organization developed the Unified Dairy Cow Score Card for judging dairy cattle?

Purebred Dairy Cattle Association

11. What is defined as a response of the animal to a stimulus when it is associated with a negative situation?

Stress

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

Thighs

13. What causes mold and spoilage of silage?

Oxygen

14. 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

15. According to the Dairy Cow Unified Scorecard, how many points are allotted for Rear Feet and Legs?

20 points

16. What nutrient is so important that a loss of only 10% in the body results in death?

Water

17. Cows burp frequently to release gas from the rumen during normal digestion. If the burping or eructation mechanism becomes paralyzed, gas is trapped, and the cow then becomes what?

Bloated

18. Depending on the operation, feed costs are usually what percent of annual cow costs?

55 to 60%

19. If a feed contains 70% moisture, what is its percent dry matter?

30% dry matter

20. Technology allows veterinarians to detect whether a cow is pregnant at 25 days into gestation using what mechanical test?

Ultrasound

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

Inadequate ventilation

22. What company, with support from dairy check-off and food scientists offers a reduced-sugar, low-fat chocolate milk?

McDonald's

23. What element is used to keep bull semen frozen?

Liquid nitrogen

24. What is the major problem caused by using wet sawdust as bedding for cows?

Mastitis

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

Carbohydrates

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

Nucleus

27. What is the costliest disease affecting the dairy industry?

Mastitis

28. What part of the alfalfa plant has the highest percent digestibility?

Leaves

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

Estrus

30. Which class of nutrients has the most energy per pound: fats, carbohydrates, or protein?

Fats

31. Which dairy breed's milk has the highest butterfat percentage on average?

Jersey

32. What island is home to Japan's largest dairy region?

Hokkaido

33. What do the initials USDA stand for?

United States Department of Agriculture

34. Approximately how many hours after the end of standing estrus will the follicle rupture?

12 to 16 hours

35. Which vitamin deficiency may result in respiratory diseases, night blindness, scours, rough hair coat, and reproductive failure?

Vitamin A

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

To reduce or prevent udder infections

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

Total Digestible Nutrients

38. Why is colostrum important to newborn calves?

Helps build the calf's immune system or antibodies

39. What season of the year are the incidences of retained placentas and metritis the highest?

Summer

40. What Wisconsin based chain has been making a habit of thanking farmers?

Culver's

41. How many pounds of water does a cow need to consume to produce one pound of milk?

4 to 6 pounds

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

32 teeth

43. A heifer is born twin to a bull. When can she become registered?

When it can be proven she is a breeder

44. The release of which hormone causes the uterus to contract more forcefully and initiates the expulsion of the fetus?

Oxytocin

45. 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

46. What type of blood cells help cows fight infections?

White blood cells

47. What term describes the return of the uterus to normal function after calving?

Uterine involution

48. What does mastication mean?

Chewing

49. Pinkeye can spread through a herd and leave substantial economic losses in its wake in less than how many hours?

12 hours

50. In regard to milk, what does DRPC stand for?

Dairy Records Processing Center

51. In general terms, what are the chemical messengers which control a cow's estrus cycle?

Hormones

52. Who judged the 2022 Premier National Junior Ayrshire Show?

Michael Creek

53. A cow should spend how many hours a day lying in the stall resting and "making milk"?

10 to 14 hours

54. What is the name of the waxy substance in the teat duct which helps provide a physical barrier to bacteria?

Keratin

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

Vitamin D

56. What is the average weight of a mature Ayrshire cow?

1,200 pounds

57. What term is used to describe forages that are seeded every year?

Annuals

58. What technology did Professor Enos Perry promote in the United States?

Artificial insemination

59. How can people get infected with tuberculosis?

Drinking unpasteurized milk from infected cows or contaminated water

60. Mange is contagious and tends to occur in dairy cattle especially during what season?

Fall or winter

61. During hot weather, what happens to cow's feed intake and milk production: no change, increase or decrease for each?

Both decline

62. In which stomach compartment of a calf is the enzyme rennin produced?

Abomasum

63. What breed of dairy cows has the undesirable recessive called Weavers?

Brown Swiss

64. 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

65. In a feeding program, what do the initials DMI stand for?

Dry Matter Intake

66. When cutting sudangrass you should leave a stubble, that is how many inches long to allow regrowth of tillers and stems?

8 inches

67. NAAB uses the percent DBH to report calving ease information. What do the initials DBH stand for?

Difficult Births in Heifers

68. What is lactose known as?

Milk sugar

69. A second or later lactation cow produces half of her total lactation production how many days, after calving?

120 days (+/-10)

70. Most bacteria grow at what Fahrenheit temperature?  
70 to 100 degrees F
71. What is parturition?  
Calving or giving birth
72. How long can sperm live after thawing if semen is maintained at 95 degrees F?  
One hour
73. What disease in humans is a weakening of the bones through loss of calcium and minerals?  
Osteoporosis
74. In order to minimize silage seepage, forages should be harvested at what percent moisture?  
50 to 65%
75. What hormone is injected into cattle to cause superovulation?  
Follicle Stimulating Hormone
76. NMPF is a national legislative body for dairy producers. What does NMPF stand for?  
National Milk Producers Federation
77. What is the average gestation period, in days, for a cow?  
279 days (+/-5 days)
78. What is the name of the hormone that stimulates the incorporation of glucose, amino acids and fatty acids into body tissue?  
Insulin
79. In which breed of dairy cows is the incidence of milk fever most common?  
Jersey



80. Name the dairy cooperative with the most member farms.

Dairy Farmers of America

81. What is the major ligament of the udder which divides it into left and right halves?

Median suspensory ligament

82. How do cows effectively lose body heat during hot weather?

Sweating or panting

83. Research indicates that cud chewing is necessary to maintain optimum ruminant conditions for good feed utilization. About how many minutes of cud chewing is needed for each pound of dry matter in the ration?

12 to 20 minutes

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

Nitrogen

85. 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

86. What proteins are high in colostrum and protect the calf against organisms that cause scours and other diseases?

Immunoglobulins or antibodies

87. What is the purpose of the hormone oxytocin?

Allow milk letdown

88. When singeing udder hair, slowly pass the flame how many inches below the udder?

6 to 8 inches

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

Protein

90. Which vitamin is essential for normal calcium/phosphorus metabolism?  
Vitamin D
91. How are copper sulfate and formalin frequently used in a herd health program?  
Foot bath
92. In 1938, the first A.I. cooperative was started in the U.S., in which state?  
New Jersey
93. What happens to the nitrate levels of corn after it has been ensiled?  
Lowers
94. In feed analysis, what is the name for the index of forage quality which combines ADF and NDF?  
Relative Feed Value (RFV)
95. On a dairy farm, what does the term herringbone refer to?  
Milking parlor
96. What is the purpose of adding titanium dioxide to non-fat milk?  
Whitens the milk
97. When a cow is stressed, how many minutes will it take for her heartbeat to slow down?  
20 to 30 minutes
98. Which hormone used in reproductive management destroys or regresses the corpus luteum?  
Prostaglandin or prostaglandin F2 alpha
99. A low blood level of what mineral causes milk fever?  
Calcium

100. What is the single largest product from the beef carcass?

Ground beef

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

Forages

102. According to the Dairy Cow Unified Score Card, what is the maximum amount of points for udder cleft?

5 points

103. Most A.I. organizations recommend that inseminators should place semen where?

Uterine body

104. Milk-rich diets help shield against what common human stomach problem?

Ulcers

105. Which hormone released during parturition softens the cervical and vaginal tissues and causes the dense connective tissue and ligaments in the pelvic area to become more elastic?

Relaxin or estrogen

106. What term is defined as the loss of feed from the point of harvest or delivery, to what is consumed by the cow?

Feed shrink

107. At what Fahrenheit temperature should your refrigerator be set to store medicines?

35 to 46 degrees F

108. Name of the oldest known cheese.

Gorgonzola

109. Which B vitamin is often recommended as a feed additive to minimize the occurrence of fatty liver and Ketosis in fresh cows?

Niacin