

2023 NAILE 4-H Dairy Quiz Bowl

Phase A – Written Exam

1. How many pounds does a standard bushel of corn weigh?
56 Pounds
2. If a calf is fed 4 quarts of colostrum, how many grams of serum immunoglobulin-g (IgG) should there be?
200 grams (accept 175 to 225)
3. If a cow was observed in heat on July 10th, what date should her next heat period be expected?
July 31st
4. Once a straw of semen is thawed, it should be maintained at what temperature Fahrenheit to achieve the best results.
90 to 95 Degrees Fahrenheit
5. Which stomach compartment removes water?
Omasum or manyplies
6. In what structure in the udder is milk produced?
Alveoli
7. Which major hormone is produced by the corpus luteum?
Progesterone
8. How many traits are evaluated when using the linear evaluation scorecard?
15
9. For the most profit and production from a dairy heifer, at what age is most ideal for calving?
22 to 24 months old
10. Most off-flavors in whole milk are associated with which component?
Butterfat
11. It takes how many pounds of whole milk to make 1 gallon of ice cream?
12 Pounds
12. What type of immunity does a newborn calf receive from consuming colostrum?
Passive immunity
13. White muscle disease of calves is caused by a deficiency of which mineral?
Selenium
14. What organ is affected by endometritis?
Uterus

15. What should the temperature of the water be when thawing semen?
90 to 95 Degrees Fahrenheit
16. How much does an average Holstein calf weigh at birth?
85 Pounds (80 to 90 pounds)
17. Leukocytes are also known as what cell type?
White blood cells
18. What is the normal respiratory rate of the dairy cow?
30 Breaths per minute (28 to 32 acceptable)
19. Which hormone maintains pregnancy?
Progesterone
20. Calf scours are often caused by 3 major classes (not species) of organisms. Name 1 of them.
Bacteria; Parasite; Virus
21. What vitamin is required for good night vision?
Vitamin A
22. What is the average percent of water in milk from a Holstein cow to the nearest percent?
87 Percent (86 or 87 Percent)
23. A farm's ROA is a measure of profitability and efficiency. What does the acronym ROA stand for?
Return On Assets
24. What is the recommended width of a free stall for a cow weighing 1200 to 1500 lbs.?
45 to 48 Inches
25. What percentage of the score is allocated to dairy strength in the Holstein association's classification system?
20 Percent
26. If a feed contains 65% moisture, what is its percent dry matter?
35 Percent
27. Cow's milk is what percent lactose to nearest tenth?
4.8 Percent (4.7 to 4.9)
28. How many pounds of body weight are in one animal unit?
1000 pounds
29. In terms of animal health, what does the acronym MLV stand for?
Modified live vaccine

30. All farm equipment should have the slow-moving vehicle emblem. What 2 colors should it be?

Orange and red (both required)

31. When managing labor, the manager is encouraged to develop SOP's to help employees understand their responsibilities. What does SOP stand for?

Standard Operating Procedures

32. If you have 4 milking units and it takes you 2 hours to milk 48 cows, how many minutes is each cow at milking unit?

10 min/cow

33. What is the term for plants that are seeded each year and complete their growth in one crop year?

Annuals

34. What is the technical name given to the mass of membranes and blood cells that is expelled after a calving?

Placenta

35. Which udder trait receives the most emphasis in the Holstein Association Udder Composite Index?

Udder depth

36. What type of immunity is produced by an animal when an antigen enters the body as a disease or by a vaccine?

Active immunity

37. Which is the name of the volatile fatty acid that is produced in the rumen that is the precursor for glucose?

Propionate

38. What disease does the bacteria *Moraxella bovis* cause in dairy cattle?

pinkeye

39. What should be the cfu/ml of whole milk to be fed to calves after pasteurization?

< 20000

40. When scours occur in the first 24 to 48 hours of life, what bacteria usually causes the problem?

E. coli

41. Milk that is used to make butter is sold as what class of milk?

Class IV

42. What is the recommended feeding space for a pregnant heifer (18 mos. to calving)?

24 Inches per head

43. If a cow is in constant heat, what might this be a sign of?

Cystic ovaries

44. How many hours do sperm live after being deposited in the cow's reproductive tract?

24 to 30 hours

45. Which county in the United States produces the most milk?
Tulare County, California
46. For every 100 pounds of milk marketed, how much money is deducted from the producer's milk check for dairy promotion and product research?
15 Cents
47. You purchased a ton of 8-12-10 fertilizer. How many pounds of phosphate are in the fertilizer?
240 Pounds
48. If calves have received enough high quality colostrum, how many grams of serum total protein should be found per deciliter of blood?
10 grams or greater
49. If 2 black and white cows are mated that are both carriers of the red gene, what percentage of the offspring will be red and white?
25 Percent
50. Which anion has the greatest impact on urine pH?
Chloride