

2018 Virginia FFA Milk Quality and Products Career Development Event Written Exam

Name: _____ FFA Chapter: _____

Instructions: This exam consists of 60 multiple-choice questions. Each question is worth two points. Choose the single best answer to each question and mark your answer on the back of your Scantron form in the "Written Exam" sections. Time limit is 40 minutes.

Milk Production

- What is the most costly disease in dairy cattle?
 - Brucellosis
 - Johne's Disease
 - Ketosis
 - Mastitis
 - Metritis
- What is the number one reason for culling in U.S. dairy herds?
 - Feet and legs
 - Injury
 - Low milk production
 - Mastitis
 - Reproductive failure
- When were bulk tanks first used on farms?
 - 1880
 - 1917
 - 1938
 - 1972
 - 1994
- The milk of which breed is known for its golden color?
 - Ayrshire
 - Brown Swiss
 - Guernsey
 - Holstein
 - Jersey
- Heifers account for what percent of total farm expenses on an average dairy farm?
 - 5-10%
 - 15-20%
 - 25-30%
 - 35-40%
 - 45-50%
- If a farmer said that he was feeding a 16% dairy feed, to what would the 16% be referring?
 - Crude fiber
 - Crude protein
 - Fat
 - Soluble protein
 - Total digestible nutrients
- The most limiting amino acids in dairy cattle nutrition are lysine and _____.
 - Arginine
 - Histidine
 - Methionine
 - Phenylalanine
 - Valine
- What mineral is needed by the dairy cow in the largest quantity?
 - Calcium
 - Magnesium
 - Phosphorus
 - Potassium
 - Sodium
- An average dairy cow drinks 30 to 50 _____ of water each day.
 - Gallons
 - Ounces
 - Pints
 - Pounds
 - Quarts
- What is generally considered the best material for covering a bunker silo?
 - Mulch
 - Plastic
 - Sand
 - Straw
 - Tires

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11. What is the largest cost in milk production?
 - A. Feed
 - B. Insurance
 - C. Interest
 - D. Labor
 - E. Replacements
12. What are the spherical clusters of secretory cells in the mammary gland that are arranged in grape-like structures called?
 - A. Alveoli
 - B. Keratin
 - C. Lobules
 - D. Myoepithelium
 - E. Parenchyma
13. What is the period of time when a cow is in milk called?
 - A. Calving interval
 - B. Dry period
 - C. Gestation
 - D. Lactation
 - E. Parturition
14. How is pulsation rate defined?
 - A. The amount of time a pulsator creates vacuum to open the liner compared with the amount of time it admits air to collapse the liner
 - B. The cyclic opening and closing of a teat cup liner
 - C. The number of times per minute that the pulsator opens and closes
 - D. The part of the milking system that causes the alternate vacuum pressure between the teat cup shell and liner
 - E. When cyclic movement of the liners of two teat cups within a cluster alternates with the movement of the other two liners
15. What is the milk-mineral deposit on milk handling equipment called?
 - A. Keratin
 - B. Milk stone
 - C. Rancidity
 - D. Residual milk
 - E. None of the above
16. What hormone can interfere with milk ejection when a cow becomes frightened or upset?
 - A. Adrenaline
 - B. Estrogen
 - C. Oxytocin
 - D. Progesterone
 - E. Prolactin
17. How often should teat cup liners generally be replaced?
 - A. Every 1,000 - 1,200 cow milkings
 - B. Daily
 - C. Weekly
 - D. Monthly
 - E. Yearly
18. What is the recommended temperature of water for washing the bulk tank, lines, and other equipment?
 - A. 100°F
 - B. 145°F
 - C. 160°F
 - D. 180°F
 - E. 212°F
19. What is the legal limit for somatic cell counts in raw milk in the United States?
 - A. 100,000 cells/ml
 - B. 400,000 cells/ml
 - C. 500,000 cells/ml
 - D. 750,000 cells/ml
 - E. 1,000,000 cells/ml
20. What is traditionally the recommended length of the dry period for dairy cows?
 - A. 15-30 days
 - B. 45-60 days
 - C. 75-90 days
 - D. 120-150 days
 - E. 305 days
21. What state is ranked first for total milk production?
 - A. California
 - B. Colorado
 - C. New York
 - D. Texas
 - E. Wisconsin

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22. Which of the following is a laboratory test available for farmers through DHI?
- A. Butterfat percentage
 - B. Milk urea nitrogen
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23. What term is defined as the use of technologies to measure physiological, behavioral, and production indicators on individual animals to improve management strategies and farm performance?
- A. Animal well-being
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24. On average, how many days are there between heat periods in dairy cattle?
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 - C. 50%
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 - C. Genomics
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29. Weaver is an undesirable recessive trait found in which breed of dairy cattle?
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30. Which of the following is an example of a zoonotic disease?
- A. Brucellosis
 - B. Cow pox
 - C. Rabies
 - D. All of the above
 - E. None of the above

Milk Marketing

31. Which volume of milk weighs 2.15 pounds?
- A. Gallon
 - B. Half gallon
 - C. Half pint
 - D. Pint
 - E. Quart

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- A. Delaware
 - B. New York
 - C. Pennsylvania
 - D. Virginia
 - E. Wisconsin
33. In what year was the milk bottle invented?
- A. 1884
 - B. 1901
 - C. 1925
 - D. 1940
 - E. 1965
34. Who received the first patent for condensed milk?
- A. Stephen Babcock
 - B. Gail Borden
 - C. W. D. Hoard
 - D. Louis Pasteur
 - E. Harvey Thatcher
35. What is the largest dairy cooperative in the United States?
- A. California Dairies, Inc.
 - B. Cooperative Milk Producers
 - C. Dairy Farmers of America
 - D. Land O'Lakes
 - E. Maryland & Virginia Milk Producers Cooperative Association
36. What company is the largest processor and distributor of milk and dairy products in the United States?
- A. Danone
 - B. Kraft Foods
 - C. Marva Maid
 - D. Nestlé USA
 - E. WhiteWave Foods
37. What instrument is used to test the freezing point of milk to determine if water has been added?
- A. Brix refractometer
 - B. Centrifuge
 - C. Cryoscope
 - D. Pasteurizer
 - E. Trocar
38. What test is used to determine if raw milk has been commingled with pasteurized milk?
- A. Acid degree value
 - B. Phosphatase test
 - C. Sediment test
 - D. Somatic cell count
 - E. Standard plate count
39. How is standardization defined?
- A. Process by which vitamins are added to milk
 - B. Process of dividing milk into skim milk and cream
 - C. Process that assures that milk and dairy products will be uniform in protein and fat content
 - D. Process that destroys any disease-producing bacteria that might be present in raw milk
 - E. Process that turns cream into butter
40. What is the fluid by-product of cheese making called?
- A. Buttermilk
 - B. Casein
 - C. Cream
 - D. Curds
 - E. Whey
41. What is the minimum total solids-not-fat content allowed in the legal definition of milk?
- A. 1%
 - B. 3.25%
 - C. 8.25%
 - D. 10%
 - E. 21.2%

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42. Vitamin D is added to milk at the time of processing to prevent what disease?
- A. Arthritis
 - B. Diabetes
 - C. High blood pressure
 - D. Pneumonia
 - E. Rickets
43. What flavor occurs when there are large numbers of bacteria present in milk?
- A. Acid
 - B. Bitter
 - C. Oxidized
 - D. Rancid
 - E. Sour
44. Antibiotic residues are not allowed in milk for human consumption. What is the main reason for this regulation?
- A. Antibiotics are not a natural part of milk.
 - B. Bacteria may become resistant to antibiotics.
 - C. Milk that contains antibiotic residues is not good for cheese making.
 - D. Some people are allergic to antibiotics.
 - E. None of the above
45. The high temperature, short time method of pasteurization heats milk to 161°F for how long?
- A. 15 seconds
 - B. 30 seconds
 - C. 15 minutes
 - D. 30 minutes
 - E. 60 minutes
46. How many calories are in a cup of reduced fat milk?
- A. 5
 - B. 80
 - C. 100
 - D. 120
 - E. 150
47. Titanium dioxide is often added to fat free milk for what purpose?
- A. To fortify the milk with Vitamin A
 - B. To keep the fat molecules in suspension
 - C. To kill pathogens
 - D. To provide more flavor
 - E. To whiten the milk
48. What most affects the amount of cheese one can get from a unit of milk?
- A. Fat content
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 - C. Mineral content
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49. What is the most popular variety of cheese in the United States?
- A. American
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50. Federal standards requires ice cream to contain a minimum of _____ percent milk fat.
- A. 3.25
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 - D. 18
 - E. 24
51. Which piece of legislation provided for Federal Milk Marketing Orders?
- A. Agricultural Marketing Agreement Act of 1937
 - B. Capper-Volstead Act
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52. Which of the following is an example of a Class III dairy product?
- A. Butter
 - B. Cheddar Cheese
 - C. Chocolate Milk
 - D. Sour cream
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53. The top 50 milk cooperatives account for what percent of the milk produced in the United States?
- A. 25%
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54. What is the main focus of the Cooperatives Working Together (CWT) program?
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55. What state ranks first for the number of organic dairy cows?
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56. How much per hundredweight of milk sold is deducted from every producer's milk check to pay for promotion and research through the dairy checkoff?
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57. Which of the following is celebrated during July?
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58. Which U.S. fast food chain uses the most milk?
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59. What is milk as it comes from the cow prior to processing called?
- A. Colostrum
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 - C. Raw milk
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 - E. Ropy milk
60. What solids component of cow's milk is present in milk in the largest quantity?
- A. Fat
 - B. Lactose
 - C. Minerals
 - D. Protein
 - E. Water

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KEY

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 - B. Lactose**
 - C. Minerals
 - D. Protein
 - E. Water