



Milk Quality and Products

Select the one best answer for each question

Please DO NOT write on exam

QUALITY MILK PRODUCTION

1. What is the maximum bacteria count per milliliter of milk allowed for pasteurized Grade “A” milk?
 - A. 20,000
 - B. 50,000
 - C. 100,000
 - D. 400,000
2. The general recommendation for Holstein calves weighing about 90 pounds is to feed _____ quarts of colostrum within four hours of birth.
 - A. 1
 - B. 4
 - C. 6
 - D. 8
3. The microbiological standard for unpasteurized Grade A milk is _____ bacteria or less per milliliter of milk.
 - A. 20,000
 - B. 50,000
 - C. 100,000
 - D. 750,000
4. Which state had the most dairy farms in 2020?
 - A. California
 - B. Wisconsin
 - C. New York
 - D. Minnesota
5. Which of the following occurs during the HTST pasteurization process?
 - A. The amount of protein is decreased
 - B. Thermophilic spore-forming microorganisms are eliminated
 - C. Pathogenic microorganisms are killed
 - D. All the milk is heated to at least 170°F

6. Cracked and blistered rubber parts of milking machines are likely to cause _____.
- A. high bacteria counts of milk
 - B. oxidation of milk
 - C. rancid flavor in milk
 - D. high freezing points of milk
7. How long after birth should fermented feed first be introduced into a calf's diet?
- A. 10 days
 - B. 1 month
 - C. 6 weeks
 - D. 4 months
8. What is the term used to describe amino acids that must come from the food humans eat because they cannot be made by the body?
- A. whey protein
 - B. casein
 - C. essential
 - D. non-essential
9. Who appoints members of the Fluid Milk Processor Promotion Board?
- A. US Secretary of Agriculture
 - B. Food and Drug Administration (FDA)
 - C. Chair of the DMI Board
 - D. Chair of National Milk Producers Federation
10. Raw milk somatic cell count must be _____ or less to meet Grade A government standards in the United States and _____ or less to meet export standards required by the European Union (EU).
- A. 20,000; 100,000
 - B. 250,000; 400,000
 - C. 400,000; 750,000
 - D. 750,000; 400,000
11. The document used by the U. S. dairy industry that contains the rules for producing today's fresh pasteurized milk supply is _____.
- A. The Code of Federal Regulations
 - B. Standard Methods for the Examination of Dairy Products
 - C. The Grade A Pasteurized Milk Ordinance
 - D. The Codex Alimentations of the World Health Organization

12. Cows produce a lot of saliva while chewing, which contains a _____ compound that helps to reduce the acidity levels in the rumen.
- A. magnesium oxide
 - B. sodium bentonite
 - C. bicarbonate
 - D. calcium carbonate
13. _____ is the hormone naturally released by the cow to stimulate milk letdown.
- A. Oxytocin
 - B. Progesterone
 - C. Estrogen
 - D. adrenaline
14. The ability of lipase to attack milkfat and produce a rancid off flavor is enhanced by _____.
- A. feeding cows moldy hay
 - B. excessive agitation of warm raw milk
 - C. exposing milk to sunlight
 - D. poorly cleaned milking equipment
15. Bacteria silage inoculants should be frozen or refrigerated below what temperature when storing?
- A. 10 °F
 - B. 30 °F
 - C. 40 °F
 - D. 50 °F
16. Which breed of dairy cattle typically has the highest percentage of A1 (versus A2) genes for the beta-casein protein?
- A. Jersey
 - B. Normande
 - C. Guernsey
 - D. Holstein
17. At what temperature should the water be maintained at the beginning of the alkaline detergent wash cycle while cleaning milking equipment?
- A. At least 100° F
 - B. 100° to 115° F
 - C. At least 120° F
 - D. 160° to 170° F

18. Adulteration of milk with water is unlawful and can be detected by testing for _____.
- A. titratable acidity
 - B. total milk solids
 - C. a high freezing point
 - D. somatic cells
19. For removing biofilms from milk equipment, which of the following is expected to be most effective?
- A. Hot water
 - B. Peracetic acid
 - C. Detergent
 - D. Sodium Chloride
20. The two most common tests used for determination of unpasteurized milk quality are _____ and _____.
- A. standard plate count and color
 - B. somatic cell count and standard plate count
 - C. flavor and titratable acidity
 - D. somatic cell count and odor
21. What product has grown in popularity as a bedding material because it is recycled from manufacturing and construction waste, making it an affordable product that has good moisture absorption, low bacteria growth, and soil benefits?
- A. Chloride
 - B. Magnesium
 - C. Lime
 - D. Gypsum
22. Milk is a major nutritional source of which mineral that combined with vitamin D and exercise builds strong bones and teeth?
- A. calcium
 - B. iron
 - C. phosphorous
 - D. potassium
23. Salty flavor in milk can be attributed to which two things?
- A. Too much salt in the ration and impaired kidney function of the cow
 - B. Excessive feeding of minerals and dry roughage
 - C. Cows with mastitis and milk produced late in a cow's lactation period
 - D. Salt based sanitizers or alkaline water for drinking

24. On an annual basis, what percentage of the total U.S. dairy herd is culled each year?
- A. 10%
 - B. 20%
 - C. 30%
 - D. 40%
25. The major cause of oxidized flavor in milk is _____.
- A. the large intake of salt by the cow
 - B. mastitis
 - C. exposure to light
 - D. bacteria
26. After the first touch of the udder the milking unit should be attached within _____ seconds for optimal milking time.
- A. 10 to 25 second
 - B. 30 to 50 seconds
 - C. 60 to 90 seconds
 - D. 120 to 160 seconds
27. Frequently caused by over milking, what is the name of the condition in cows when cells in the inner lining of the teat end begin to overgrow?
- A. Hyperkeratosis
 - B. Carcinoma
 - C. Teat Canker
 - D. Hairy Warts
28. Even when there are no clinical signs, a cow's milk production begins to decline when its somatic cell count is greater than how many cells/ml?
- A. 100,000 cells/ml
 - B. 200,000 cells/ml
 - C. 400,000 cells/ml
 - D. 750,000 cells/ml

29. The term used to describe a lag of at least 30 seconds between the milking unit attachment and the incline phase of milk flow is _____.
- A. delayed milk ejection
 - B. milk let-down
 - C. milk flow dynamics
 - D. vacuum delay
30. The map that describes a species' DNA sequence that geneticists use to evaluate and share genomic information is called _____.
- A. reference genome
 - B. whole sequence genome
 - C. single nucleotide polymorphism
 - D. recessive gene



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QUALITY MILK PRODUCTION KEY

National
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Organizat

Question	Answer	Standard	Standard	Standard
1.	A			
2.	B			
3.	C			
4.	B			
5.	C			
6.	A			
7.	D			
8.	C			
9.	A			
10.	D			
11.	C			
12.	C			
13.	A			
14.	B			
15.	C			
16.	D			
17.	D			
18.	C			
19.	B			
20.	B			
21.	D			
22.	A			
23.	C			
24.	C			

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25.	C			
26.	C			
27.	A			
28.	B			
29.	A			
30.	A			



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MILK MARKETING

31. Many U.S. dairy manufacturing companies belong to an organization that is the dairy processors' chief lobbying voice in the nation's capital. What is the name of the organization?
- A. International Dairy Federation
 - B. Dairy Farmers of America
 - C. National Milk Producers Federation
 - D. International Dairy Foods Association
32. In comparison to the Margin Protection Program for dairy, the Dairy Margin Coverage program offers three new higher levels of margin coverage on a producer's first 5 million pounds. Which of the following is not one of those levels?
- A. \$8.50
 - B. \$9.00
 - C. \$9.50
 - D. \$10.00
33. Mastitis has severe economic consequences. The high somatic cell count causes a decrease in cheese yield and the bacteria causes a (an) _____ in the lactose (milk sugar).
- A. denaturation
 - B. increase
 - C. decrease
 - D. gram-negative infection
34. The 2018 farm bill established the _____ that makes it easier for producers, cooperatives, and processors to offer milk to food banks.
- A. Dairy for Kids Program
 - B. Food Bank Provision Program
 - C. Milk Donation Program
 - D. Producer Food Bank Alliance

35. A milk producer would receive the maximum price for milk delivered within a milk marketing order if all of it was used to make _____.
- A. dry whole milk
 - B. ice cream
 - C. mozzarella cheese
 - D. pasteurized milk
36. Created by the Fluid Milk Promotion Act of 1990, this organization collects an assessment from processors marketing more than 3 million pounds of milk. This organization develops and finances generic advertising programs to expand markets and uses of US fluid milk products. What is the name of this organization?
- A. Dairy Marketing Inc.
 - B. National Milk Producers Federation
 - C. National Fluid Milk Processor Promotion Board
 - D. International Dairy Federation
37. What is the term used to describe the processing credits that are designed to reflect the average processing costs associated with producing cheese, butter, nonfat dry milk, or dry whey?
- A. Cost ratio
 - B. Make allowance
 - C. Competitive pay price
 - D. Producer Price differential
38. How many pounds of cheese do U.S. consumers eat annually per capita?
- A. 15 pounds
 - B. 29 pounds
 - C. 37 pounds
 - D. 45 pounds
39. One gallon of 40% cream weighs approximately _____ pounds.
- A. 7.7
 - B. 8.3
 - C. 8.6
 - D. 9.2

40. What state most recently entered the Federal Milk Marketing Order system?
- A. Wisconsin
 - B. California
 - C. New York
 - D. Florida
41. In the updated 2020-2025 Dietary Guidelines for Americans, USDA upheld dairy's standing as a major food group critical to maintaining healthy diets, recommending the equivalent of _____ one-cup servings of milk per day for adults ages 19 through 59.
- A. two
 - B. three
 - C. four
 - D. five
42. While there were significant disruptions in trade throughout 2020, US dairy exports _____ when compared to the dairy exports of 2019.
- A. grew by 9%
 - B. decreased by 8%
 - C. grew by 25%
 - D. declined significantly by 20%
43. What is the name given to the system utilized by the Federal Milk Marketing Orders that sets milk prices based on the finished dairy product in which the milk was used?
- A. Free market pricing
 - B. Classified pricing
 - C. Hedge pricing
 - D. Creative product pricing
44. Milk has more protein than you may think. An 8-ounce glass of real milk has _____ times more protein than plant-based beverages, like almond milk. In addition, milk protein is a complete protein, while most plant protein sources are missing some of the essential amino acids your body needs.
- A. 2
 - B. 8
 - C. 15
 - D. 20

45. In ice cream, the term that refers to the volume of air relative to the initial volume of ice cream mix is?
- A. Fluffiness
 - B. Overrun
 - C. Airiness
 - D. Viscosity
46. Dairy herds now average more than 1,000 head in _____ states in 2020.
- A. four
 - B. eight
 - C. fifteen
 - D. eighteen
47. Although, some states produce more milk than their population can consume (net exporters of milk), other states do not produce enough milk to full fill their population needs (net importers of milk). Which of the following states is a net importer of milk?
- A. Florida
 - B. South Dakota
 - C. Oregon
 - D. California
48. Which variety of cheese represents the largest wholesale sales volume, annually, in the U.S.?
- A. Swiss
 - B. Cheddar
 - C. Mozzarella
 - D. Processed American
49. To make one pound of Cheddar cheese requires approximately _____ pounds of whole milk.
- A. 8
 - B. 10
 - C. 20
 - D. 44
50. How many states had an increase in dairy operations from 2019 to 2020?
- A. 20
 - B. 10
 - C. 5
 - D. 0

51. A Federal Milk Marketing Order is not authorized unless two-thirds of the affected _____ milk to the proposed marketing area approves its implementation.
- A. dairy cooperatives supplying
 - B. producers supplying
 - C. cheese processors manufacturing
 - D. handlers processing
52. Which country purchased the most dairy products from the United States during 2020?
- A. Mexico
 - B. New Zealand
 - C. Canada
 - D. China
53. Which two states produced the most milk in 2020?
- A. New York and Wisconsin
 - B. Idaho and Texas
 - C. California and Idaho
 - D. California and Wisconsin
54. A Federal milk marketing order classifies milk based on its use. The classes of milk have different _____.
- A. percentages of fat
 - B. prices paid to producers
 - C. somatic cell counts
 - D. quality standards
55. The annual production of milk for the United States during 2020 was 223 billion pounds, which was _____ 2019 annual milk production.
- A. 2.2% higher than
 - B. 2.0 lower than
 - C. 3.1% higher than
 - D. unchanged from
56. What is the term for the actual amount received by a dairy producer for milk sold to a processor?
- A. Milk-feed ratio price
 - B. Cooperative bonus premium
 - C. Federal Order price
 - D. Mailbox price

57. Which country sold the most dairy products to the United States in 2020?

- A. Mexico
- B. Russia
- C. Canada
- D. New Zealand

58. The USDA-AMS standards for dry whey require that it be not more than _____, and not more than _____.

- A. 10% moisture and 0.5% milkfat
- B. 5% moisture and 1.5% milkfat
- C. 5% moisture and 5% milkfat
- D. 10% moisture and 1.5% milkfat

59. Who was the largest dairy products processor that filed bankruptcy in 2020?

- A. DFA (Dairy Farms of America)
- B. Kroger
- C. Land'O Lakes
- D. Borden

60. What item of federal legislation authorized the legality of farmer cooperatives and provided them with legal rights of negotiation for their members in matters related to the pricing structures and marketing of milk products?

- A. Morrill Act
- B. Sherman Act
- C. Capper-Volstead Act
- D. Farm Bill



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Aug-23

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MILK MARKETING KEY

Question	Answer	Standard	Standard	Standard
31.	D			
32.	D			
33.	C			
34.	C			
35.	D			
36.	C			
37.	B			
38.	C			
39.	B			
40.	B			
41.	B			
42.	A			
43.	B			
44.	B			
45.	B			
46.	C			
47.	A			
48.	C			
49.	B			
50.	D			
51.	B			
52.	A			
53.	D			
54.	B			

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55.	A			
56.	D			
57.	C			
58.	B			
59.	D			
60.	C			