

2005 Iowa FFA Association Dairy Foods CDE
Written Exam

1. Which of the following statements is NOT an accurate representation of processing steps used in making natural cheeses.
 - a. Cheddar: Curd particles matted together
 - b. Colby: Curd particles kept separate
 - c. Swiss: Bacteria-ripened throughout interior with eye formation
 - d. Cottage Cheese: Pasta filata or stretched curd

2. Pasterurized process cheese food is similar to pasteurized process cheese except for the _____ of one or more of the following optional dairy ingredients: cream, milk, nonfat milk, buttermilk, cheese whey, anhydrous milk or skim milk.
 - a. addition
 - b. exclusion
 - c. curing
 - d. ripening

3. Ricotta is an example of _____ cheeses, which are obtained by concentrating whey and by coagulating the whey protein with heat and acid, with or without the addition of milk and milk fat.
 - a. mold-ripened
 - b. whey
 - c. cold-pack
 - d. surface-ripened

4. _____ products are those in which less than 50% of calories are from fat, calories are reduced by 1/3 or fat content is reduced by 50%.
 - a. Reduced fat
 - b. Fat-free
 - c. Low-fat
 - d. Light (lite)

5. Today, more than one-third of the United State's annual milk production is used to make _____.
 - a. cheese
 - b. ice cream
 - c. fluid, packaged milk
 - d. sour cream

6. Curd formation results from introducing a coagulating agent (acid and/or coagulating enzyme), adjusting the temperature, and adding salts. Rennet coagulates milk by precipitating _____.
 - a. glucose
 - b. casein
 - c. whey
 - d. milkfat

7. Research indicates that _____ may potentially reduce the risk of chronic diseases such as some cancers and heart disease.
 - a. casein
 - b. caries
 - c. sphingolipids
 - d. increased saliva flow

8. When compared to unflavored lowfat milk, lowfat chocolate milk is _____ .
 - a. just as nutritious.
 - b. less nutritious.
 - c. lower in calories.
 - d. much higher in whey content.

9. By adding a small amount of dietary fiber, this fat-free milk looks like and has the mouth-feel of 2% reduced fat milk.
 - a. Lactose-free
 - b. Homogenized Vitamin A Palmitate
 - c. Sweetened-condensed
 - d. Skim Deluxe or Skim Supreme

10. Cheese can be frozen, but it may become _____ .
 - a. mealy and crumbly when thawed.
 - b. rancid when thawed.
 - c. less nutritious.
 - d. Rubbery or stringy.

11. Cheese made from unpasteurized milk _____ .
 - a. is not legal for sale in the United States.
 - b. must be aged for at least 60 days.
 - c. usually contains high plate counts of pathenogenic bacteria.
 - d. may only be sold if the curd was coagulated with acid.

12. Emulsifiers are an important ingredient in ice cream. Emulsifiers _____ .
 - a. keep fat dispersed and in suspension.
 - b. are not needed in frozen custard-type ice creams.
 - c. prevent casein from becoming rancid.
 - d. are rarely used when pasteurized milk is used.

13. In ice cream, overrun is a measure of the _____ .
 - a. amount that ice cream expands beyond the container as it freezes.
 - b. excess production beyond consumer demand for the product.
 - c. volume of air whipped into the ice cream mix.
 - d. degree to which ice crystals form when ice cream freezes.

14. Component pricing was introduced in _____ .
 - a. 1611
 - b. 1890
 - c. 1988
 - d. 2000

15. Designed to increase milk production in dairy cows, recombinant bovine somatotropin (rBST) was approved for commercial use, in the United States, in _____ .
 - a. 1980
 - b. 1987
 - c. 1994
 - d. 2000

16. Milk products contain high quality proteins. The whey proteins constitute about 18% of the protein content in milk. Casein, a protein found only in milk, contains _____.
- significant levels of carcinogens.
 - 20% lipids.
 - all of the essential amino acids.
 - measurable quantities of rBST.
17. The _____ in milk plays a role in calcium absorption and utilization. _____ is needed in the proper ratio to _____ to form bone.
- vitamin B12, Vitamin B 12, phosphorus
 - phosphorus, Phosphorus, calcium
 - vitamin A, Vitamin D, calcium
 - casein, Casein, calcium
18. One cup of _____ has more mg of calcium than one cup of _____ .
- low fat (1%) milk, whole
 - whole, low fat (1%) milk
 - vanilla ice cream, evaporated milk
 - vanilla ice cream, buttermilk
19. _____ is the product resulting from the addition of _____ acid-producing bacteria to pasteurized cream containing not less than _____ milkfat.
- Heavy cream, pathogenic, 36 %
 - Cultured milk, low, 3.25 %
 - Yogurt, 10 %, 18 %
 - Sour cream, lactic, 18 %
20. _____ comes from cows fed and raised without the use of pesticides, synthetic fertilizers, or hormones.
- Certified milk
 - Substitute milks
 - Wholesome milk
 - Organic milk
21. Milkfat carries the following fat soluble vitamins:
- A, D, E, and K
 - B, B12, D and K
 - C, A, E and K
 - D, riboflavin, niacin and C
22. Homogenization is the disintegration of _____ in milk to reduce the separation of cream.
- fat globules
 - casein
 - lactic acid
 - calcium
23. Natural (not fortified) milk has an excellent nutrient profile, providing significant amounts of high quality...
- protein, calcium, riboflavin, magnesium, phosphorus, vitamin B12, vitamin B6, and vitamin D.
 - protein, calcium, riboflavin, magnesium, phosphorus, vitamin B12, vitamin C and vitamin A.
 - protein, calcium, riboflavin, magnesium, phosphorus, vitamin B12, vitamin C and vitamin D.
 - protein, calcium, riboflavin, magnesium, phosphorus, vitamin B12, vitamin B6 and vitamin A.

24. Bovine spongiform encephalopathy has resulted in
- a prohibition against using many mammalian protein sources to manufacture animal feeds given to ruminant animals.
 - an increased number of cases of Mad-cow disease in the United States.
 - decreased regulation of animal and animal product imports into the United States.
 - a ban on all animal product exports from the United States to the European Union.
25. _____ is the process of adding nutrients to milk. Because _____ exists in the fat portion, it is often added to low fat milks.
- Homogenization, milk fat
 - Pasteurization, protein
 - Fortification, vitamin A
 - Certification, calcium
26. Low calcium intake is one concern expressed by the American Academy of Pediatrics. One factor that has contributed to the local calcium intake is the change in beverages available in the U.S. food supply over the past few decades. Which of the following statements is NOT an accurate reflection of changes in the U.S. food supply.
- availability of milk has decreased since 1970.
 - availability of soft drinks has increased since 1970.
 - availability of fruit juice has decreased since 1970.
 - availability of diet soft drinks has increased since 1970.
27. Researchers from the University of Vermont, University of British Columbia, and ENVIRON Health Sciences Institute studied the diets of more than 3,000 children and teenagers ages 2-18. Their research suggests that _____.
- kids consumption of sodas and fruit drinks decreases as they get older, while milk intake increases.
 - milk products contribute more of the childrens' daily calories than sodas and fruit drinks.
 - flavored milks are the leading source of added sugars in a teen's diet.
 - flavored milks may help prevent kids from switching from milk to soft drinks.
28. The St. Louis School Milk Test (sponsored by MilkPEP, the St. Louis Dairy Council and Prairie Farms Dairy) suggests that milk consumption may be increased by:
- packaging milk in colorful containers with kid-friendly graphics.
 - restricting milk sales to the school lunch program.
 - packaging milk in paper cartons.
 - decreasing the price of milk products sold.
29. The "got milk?" campaign promotes milk consumption because milk contains proteins which are used by the body to:
- maintain normal vision and skin.
 - promote the absorption of calcium and phosphorus.
 - build and maintain strong bones.
 - maintain vital brain development and growth of body tissues.
30. Approximately how many pounds of whole milk does it take to make a pound of butter?
- 21.2 pounds
 - 12.2 pounds
 - 6.4 pounds
 - 2.12 pounds

Analyze & Interpret Information

Utilize the attached references to answer these questions.

(Source: Newer Knowledge of Dairy Foods; USDA Milk Cows and Production)

31. From 1998 to 2002, the total number of milk cows in the United States _____, while the total pounds of milk produced _____.
 - a. increased, increased
 - b. increased, decreased
 - c. decreased, increased
 - d. decreased, decreased

32. In reference to question #30, this can be attributed to _____.
 - a. an 8.3% increase in milk production per cow.
 - b. A 16 % increase in milk production per cow.
 - c. a 0.13% decrease in the total number of milk cows.
 - d. a decrease in milk prices.

33. Based on 2002 USDA data, Iowa ranks _____ in total milk cows.
 - a. 10th
 - b. 12th
 - c. 22nd
 - d. 24th

34. As a percentage of total increase, which of the following increased the most from 1996 to 2004?
 - a. Regular Ice Cream production
 - b. Total U.S. Cheese Production
 - c. Milk Production Per Cow
 - d. U.S. Milk Cow Herds of 500+ head

35. One cup of whole milk will provide a 16 year old boy with _____ of his recommended daily allowance for protein.
 - a. 13.6 %
 - b. 7.34 %
 - c. 100 %
 - d. 0 %

36. One cup of chocolate reduced fat milk and one cup of plain nonfat yogurt will provide a pregnant woman with _____ of her recommended daily allowance for protein.
 - a. 14 %
 - b. 37 %
 - c. 100 %
 - d. 272 %

37. Cheddar and Mozzarella cheeses make up _____ of total U.S. cheese production.
 - a. 33 %
 - b. 67 %
 - c. 75 %
 - d. 84 %

38. From 1998 to 2002, which state had the greatest increase in milk production per cow?
- a. Alaska
 - b. Iowa
 - c. California
 - d. Arizona
39. Milk from cows with mastitis is likely to have a pH near _____.
- a. 5.0
 - b. 6.5
 - c. 7.0
 - d. 7.5
40. Milk that has been adulterated with water is most likely to have a freezing point of _____ degrees C.
- a. -0.65
 - b. -0.3
 - c. 10
 - d. 32

KEY – 2005 Dairy Foods Exam

1. D
2. A
3. B
4. D
5. A
6. B
7. C
8. A
9. D
10. A
11. B
12. A
13. C
14. D
15. C
16. C
17. B
18. A
19. D
20. D
21. A
22. A
23. D
24. A
25. C
26. C
27. D
28. A
29. D
30. A
31. C
32. A
33. B
34. B
35. A
36. B
37. B
38. D
39. D
40. B