

Read each question carefully and select the best answer. Mark your answer to the corresponding number on the scantron bubble sheet.

Written Exam A Milk Production Quiz 2023

1. 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

2. After the first touch of the udder the milking unit should be attached within _____ seconds for optimal milking time.
 - a. 10-25 seconds
 - b. 30-50 seconds
 - c. 60-90 seconds
 - d. 120-160 seconds

3. 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

4. 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

5. The two most common tests used for determination of unpasteurized milk quality are _____ and _____.
 - a. standard plate and color
 - b. somatic cell count and standard plate count
 - c. flavor and titratable acidity
 - d. somatic cell count and odor

6. The ability of lipase to attack milkfat and produce a rancid off flavor is enhanced by _____.
 - a. feeding cows moldy hay
 - b. excessive agitation fo warm raw milk
 - c. exposing milk to sunlight
 - d. poorly cleaned milking equipment

7. The key to boosting milk protein relies largely in getting the correct amino acids to which part of the cow's digestive tract?
- rumen
 - small intestine
 - omasum
 - reticulum
8. Marketing cooperatives often offer incentives to dairy farmers for producing milk having which of the following special characteristics?
- low volume milk production per cow
 - low protein content
 - high somatic cell count
 - low bacteria count
9. _____ is the hormone naturally released by the cow to stimulate milk letdown.
- Oxytocin
 - Progesterone
 - Estrogen
 - Adrenaline
10. The CMT test detects _____ in raw milk.
- bacteria
 - red blood cells
 - somatic cells
 - antibiotics
11. How long after birth should fermented feed first be introduced into a calf's diet?
- 10 days
 - 1 month
 - 6 weeks
 - 4 months
12. Post dipping a cow's teats helps control _____.
- contagious pathogens
 - milk flow
 - hair growth
 - antibiotics
13. The microbiological standard for unpasteurized Grade A milk is _____ bacteria or less per milliliter of milk.
- 50,000
 - 75,000
 - 100,000
 - 750,000

14. By volume, milk consists of approximately _____ percent water.
- 3.7
 - 50
 - 87
 - 92
15. Which breed of dairy cattle typically has the highest percentage of A1 (versus A2) genes for the beta-casein protein?
- Jersey
 - Normande
 - Guernsey
 - Holstein
16. When feeding distillers grains in dairy feed rations, there are concerns regarding the supply of certain protein building blocks. What are the building blocks of protein?
- DNA
 - carbohydrates
 - nitrogen
 - amino acids
17. What is the maximum bacteria count per milliliter of milk allowed for pasteurized Grade "A" milk?
- 20,000
 - 50,000
 - 100,000
 - 400,000
18. Cows produce a lot of saliva while chewing, which contains a _____ compound that helps to reduce the acidity levels in the rumen.
- magnesium oxide
 - sodium bentonite
 - bicarbonate
 - calcium carbonate
19. The off-flavor in milk generally caused by exposure to sunlight or fluorescent light is _____.
- rancid
 - oxidized
 - acid
 - malty
20. The most important diseases of cattle transmissible to man through milk are _____.
- scarlet fever and Q fever
 - tuberculosis and anthrax
 - brucellosis and scarlet fever
 - tuberculosis and brucellosis

Leave 21-30 Blank

Continue to next page for marketing quiz.

Written Exam B
Milk Marketing Quiz 2023

31. The combining total classified value of producer milk received by every handler regulated under a milk order is defined as _____.
- minimum pricing
 - producers' production pricing
 - classified pricing
 - marketwide pooling
32. Most dairy cows are milked two to three times per day. On average, a Holstein dairy cow will produce _____ gallons of milk each day.
- 1 to 2
 - 8 to 9
 - 15 to 16
 - 20 to 21
33. Which of the following flavors of ice cream is the most popular, by sales volume?
- Raspberry
 - Strawberry
 - Vanilla
 - Chocolate
34. A primary reason for establishing minimum farm milk prices through the Federal milk orders is...
- to insure all dairymen have a market for milk
 - to insure all processors have adequate milk for manufacture of butter and feeds
 - to insure an adequate supply of milk for the consumer
 - to provide federal control of the production of milk
35. What is the term that is an estimate of what it costs to transform milk into a finished dairy product like butter or cheese? These estimates are important because the values are used by USDA in setting the monthly minimum prices that regulated plants must pay for the components in your milk checks
- cost ratio
 - make allowance
 - competitive pay price
 - producer price differential
36. _____ has the greatest number of dairy cows in the world with over 40 million cows.
- India
 - China
 - United States
 - Canada

37. Milk marketing cooperatives...
- are not permitted by Federal Orders
 - provide marketing power for dairy farmers
 - control Federal Orders
 - operate only outside Federal Orders
38. Under Federal Orders milk is priced based on the finished dairy product in which it is used. This is called .
- minimum pricing
 - maximum pricing
 - creative pricing
 - classified pricing
39. In a milk market with four classes of milk, Class III milk is commonly used for...
- fluid products
 - cottage cheese and cream products
 - cheese
 - butter and dry products
40. Dividing the total dollars a dairy has in assets by the number of cows determines which economic indicator?
- equity
 - total investment per cow
 - debt per cow
 - debt to asset ratio
41. Classified pricing under Federal Milk Marketing is a system that assigns value to milk based on the end use of the product. Class II pricing includes milk used to make .
- dry whole milk
 - spoonable (soft) dairy products
 - mozzarella cheese
 - pasteurized milk
42. Which of the following is true of Kefir?
- It is a fermented milk drink
 - It is made from the milk of cattle, goats, or sheep
 - It is fermented with a culture of bacteria and yeasts
 - All of the above
43. Dairy consumption growth in the United States is only 0.8 percent, but foreign consumption is growing much more quickly. Which country has increased in dairy consumption the most?
- Mexico
 - New Zealand
 - China
 - Canada

44. _____ is an effective natural choice exercise recovery drink due to its powerful nutrient package that supplies the nutrition the body needs after a workout. It has carbohydrates to help refuel the body; protein to help reduce muscle breakdown and stimulate growth; and fluid and electrolytes to aid in rehydration. Drinking it after resistance training has been shown to increase the body's ability to make new muscle and may help improve body composition
- Chocolate milk
 - Greek yogurt
 - Gatorade
 - Whey protein concentrate
45. According to the Dietary Guidelines for Americans 2015-2020, what percentage of the population is not getting the recommended three servings of dairy daily?
- less than 12%
 - 50%
 - 85%
 - 90%
46. Since 1984, when President Ronald Reagan proclaimed a National Ice Cream Month, it has been celebrated annually, every _____?
- August
 - July
 - May
 - June
47. Milk from this species is the most widely consumed milk in the world.
- Cattle
 - Goat
 - Sheep
 - Water buffalo
48. Who is the current US Secretary of Agriculture?
- Tom Vilsack
 - Sonney Perdue
 - Ann Veneman
 - John Block
49. The _____ is a voluntary program to score a farm's animal welfare practices against the industry recommendations. It is operating as a partnership of the National Milk Producers Federation and Dairy Management Inc.
- National F.A.R.M. program (Farmers Assuring Responsible Management)
 - National Dairy Checkoff Program
 - Agriculture's Animal and Plant Health Inspection Service (APHIS)
 - Animal Welfare Act (AWA)

50. Which cheese variety produced in the U.S. is consumed the greatest quantity in recent years?
- a. Cheddar
 - b. Mozzarella
 - c. Italian Style
 - d. Queso fresco

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Continue to next page for problem solving quiz.

Problem Solving 2023

Read each question carefully and select the best answer. Mark the corresponding answer on the scantron bubble answer sheet in the section marked Problem Solving. This exam must be returned to the contest coordinator when finished.

Use scenario 1 to answer questions 1-4.

Scenario 1:

Mr. Bailey hauls milk and picks up milk from four producers with a tanker and delivers to Prairie Farms Dairy. Collection amounts and milkfat content are as follows:

Producer 1 – 10,000 pounds of 3.25% milkfat milk

Producer 2 – 18,000 pounds of 3.45% milkfat milk

Producer 3 – 21,000 pounds of 3.5% milkfat milk

Producer 4 – 12,000 pounds of 3.7% milkfat milk

1. The average milkfat test of the tanker of milk is _____.
 - a. 3.28%
 - b. 3.38%
 - c. 3.48%
 - d. 3.68%

2. If milkfat bonus is \$.08 per 100 pounds for every point over 3.2% what was the bonus for the tanker truck?
 - a. \$13,644.00
 - b. \$1,366.40
 - c. \$136.64
 - d. \$13.64

3. Which producer received the largest milkfat bonus check?
 - a. Producer 1
 - b. Producer 2
 - c. Producer 3
 - d. Producer 4

4. If the tanker truck's tare weight is 19,500 pounds and the roads are regulated at 80,000 pounds gross weight, including agriculture products, is this tanker truck operating legally on the road?
 - a. Yes
 - b. No

Use scenario 2 to answer questions 5-7.

Scenario 2:

Hilltop Dairy Farm recently experienced an unfortunate barn fire and lost all their hay. The dairy farm must have enough hay to feed 50 lactating cows. Each cow eats an average of 30 pounds of baled hay per day and the farm needs to buy a 90 day supply of hay until their hay fields can be harvested. This farm contracts with another farmer to raise their heifers.

5. How many tons of hay must be purchased?
 - a. 67.5 tons
 - b. 675 tons
 - c. 13.5 tons
 - d. 135000 tons

6. If the hay costs \$75.00 per ton, what will be the cost to Hilltop Dairy Farm?
 - a. \$506.25
 - b. \$5,062.50
 - c. \$50,625.00
 - d. \$506,250.00

7. If the hay insurance policy requires a \$3,000.00 deductible per claim, how much money should Hilltop Dairy Farm receive from the insurance company when replacing they hay that burned in the fire?
 - a. \$0.00
 - b. \$2,062.50
 - c. \$47,625.00
 - d. \$503,250.00

Use scenario 3 to answer questions 8-10.

Scenario 3

A family has a dairy herd and three of their five calves being raised for 4-H are showing signs of intestinal worms. Calves weigh an average of 450 pounds each. They purchased Safe-Guard, an over-the-counter dewormer from Tractor Supply Company. Instructions for use are:

Product Overview

Ingredients

Instructions

Indications: Safe-Guard® Dewormer for Beef/Dairy Cattle and Goats 10% Suspension is for the removal and control of: Lungworm (*Dictyocaulus viviparus*); Stomach worm (adults): brown stomach worm (*Ostertagia ostertagi*); Stomach worms (adults and fourth stage larvae): barberpole worm (*Haemonchus contortus* and *H. placei*), and small stomach worm (*Trichostrongylus axei*); Intestinal worms (adults and fourth stage larvae): hookworm (*Bunostomum phlebotomum*), thread-necked intestinal worm (*Nematodirus helvetianus*), small intestinal worm (*Cooperia punctata* and *C. oncophora*), bankrupt worm (*Trichostrongylus colubriformis*) and nodular worm (*Oesophagostomum radiatum*) in cattle.

Safe-Guard® Dewormer for Beef/Dairy Cattle and Goats 10% Suspension is for the removal and control of: Stomach worms (adults): *Haemonchus contortus* and *Teladorsagia circumcincta* in goats.

Dosage and Administration: Determine the proper dose according to estimated body weight. Administer Safe-Guard® Dewormer for Beef/Dairy Cattle and Goats 10% Suspension Orally. The recommended dose of 2.3 mg/lb (5 mg/kg) is achieved when 2.3 ml of the drug are given for each 100 lbs body weight.

Storage: Store between 15°C and 30°C (59°F and 86°F).

Caution: Safe-Guard® Dewormer for Beef/Dairy Cattle and Goats 10% Suspension has an 8 day meat withdrawal and no milk withdrawal. Do not use in calves to be processed for veal. Goats- 6 day withdrawal. Do not use in lactating goats.

Shipping: Ships ambient by ground

Restrictions: Cannot ship to Canada, inquire regarding restrictions to other countries

8. How is this medicine to be administered?
 - a. Intramuscular
 - b. Intravenous
 - c. Topical
 - d. Oral

9. How much of this medicine should be administered to each calf?
 - a. 2.3 milligrams
 - b. 2.3 milliliters
 - c. 10.35 milliliters
 - d. 103.5 milligrams

10. Is this medicine liquid or powder?
 - a. Liquid
 - b. Powder