

2018 National FFA Dairy Cattle Event

Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. An example of a Class I use for milk would be to make:
A) Hard cheese, B) Ice cream, **C) Chocolate Milk**, D) Dried milk powder, E) Butter.
2. Welcome to F.F.A. Dairy as the new calf manager taking care of calves from birth to weaning. The first change you make on the dairy is in regards to the preparation of the calving pen. You decide to use sand as the base for the pen and then bed the pen with how many of inches of long straw?
A) 2 inches, B) 4 inches, **C) 6 inches**, D) 10 inches, E) 12 inches.
3. F.F.A. Dairy has had many issues with newborn calves getting sick within the first 4 weeks. The first step you take to address this issue is to measure the quality of colostrum using which instrument?
A) Brix refractometer, B) Thermometer, C) pH Meter, D) Plate Meter, E) Cryoscope.
4. To successfully deliver colostrum to newborn calves, you feed them using which of the following tools that the USDA has identified as the most common:
A) Bottle, B) Tube, C) Bucket, D) Letting the calf nurse the cow, E) All of the above.
5. After the quality of colostrum is determined and fed to the newborn calf, immunoglobulins are absorbed in what part of the digestive system?
A) Omasum, **B) Small Intestine**, C) Rumen, D) Reticulum, E) Abomasum.
6. Calves are born with a natural insulator trapping air and creating a boundary between the body and chilly outside air. Which part of the calf is this?
A) Head, B) Feet and legs, C) Depth of rib, D) Rump, **E) Hair Coat**.
7. As the calf manager keeping the calves healthy is a high priority, to achieve this you install this common item used to bring in fresh air, while removing moisture, dust and gases in warm weather?
A) Doors, **B) Fans**, C) Insulation, D) Individual calf stalls, E) All of the above.
8. For the common item you installed in question 7, how often should the housings and individual parts be cleaned for optimal performance?
A) Every 6 months, **B) Every year**, C) Every 2 years, D) Every day, E) It is not needed because it is self-maintaining.
9. A poorly maintained ventilation system on your farm can result in what percent loss of air movement?
A) 10%, **B) 30 to 50%**, C) 70-80%, D) 85-95%, E) There is no noticeable differences.
10. This has been identified as the most visible well-being problem in the dairy industry today?
A) Dehorning, B) Breeding cows by A.I., C) Feeding calves with a bucket, **D) Lameness**, E) All of the above.

11. If the heat detection rate is 60% and the conception rate is 30%, what is the pregnancy rate? A) 9%, B) 20%, **C) 18%**, D) 30% E) 45%.
12. Lameness on a dairy farm can lead to higher culling rates, reduced reproductive performance, and lower milk yield. In order to manage lameness on your farm, you implement a locomotion scoring system using a scale from 1 to 5. What score would you give to a cow who has pronounced arching of back, reluctant to move with almost complete weight transfer off the affected limb?
A) 5, B) 3, C) 2, D) 1, E) All of the above.
13. Which milk protein is being marketed as a new dairy product that is easily digestible and comparable to human breast milk? A) Whey, B) A1 beta-casein, **C) A2 beta-casein**, D) Kappa casein, E) Beta-lactoglobulin.
14. What tissue is monitored for residual drug levels at slaughter?
A) Kidneys, B) Liver, C) Large Intestine, D) Rumen, E) Heart.
15. Which dairy breed has the highest percentage of the A2 milk protein gene and which has the least? A) Holstein, Jersey, B) Brown Swiss, Holstein, C) Brown Swiss, Guernsey, D) Guernsey, Jersey, **E) Guernsey, Holstein**.
16. You have been invited to a local dairy to consult on locomotion issues that several of the cows have been having. The hoof trimmer tells you he is finding a smelly infection of the foot between the claws and toes, long, overgrown and deformed toes, and heel cracks during trimming. In order to prevent these type of problems in the future, you recommend which micro-mineral to be added to the ration.
A) Selenium, **B) Zinc**, C) Copper, D) Manganese, E) Iodine.
17. What is considered the universal standard criteria for breeding dairy heifers?
A) Body weight, B) Age, C) Height at the withers, D) Rump Width, E) All of the above.
18. F.F.A Dairy has recently been experiencing lower milk production, higher somatic cell counts, and slower milk time. You have been asked to help solve this problem. After you observe the milking procedures, the cause of the problem is identified as:
A) No pre-dip being used prior to milking, B) Dirty udders, **C) Too long pre-milking stimulation**, D) Milking dry teats, E) All of the above.
19. To help address the problems identified in #18, you help the milkers adopt a new milking procedure. Here are 5 steps you have suggested: 1) Dry teats completely with an individual towel, 2) Dip teats immediately after unit removal, 3) Pre-dip teats and provide 20-30 second contact time, 4) Attach milking unit within 1 minute after the start of stimulation, 5) Check foremilk and udder for mastitis. The order the milkers should perform these steps are:
A) 1, 2, 3, 4, 5, B) 5, 4, 3, 2, 1, C) 5, 3, 2, 4, 1, **D) 5, 3, 1, 4, 2**, E) Order doesn't matter as long as all 5 steps happen.
20. During step 5 listed in #19, the milkers find milk with flakes, clots, and the presence of blood. This is an indication of what problem:
A) Sub-clinical mastitis, **B) Clinical mastitis**, C) Acute mastitis, D) Chronic mastitis, E) All of the above.

21. What type of mastitis is the primary reason antibiotics are administered to dairy cows?
A) Sub-clinical mastitis, **B) Clinical mastitis**, C) Acute mastitis, D) Chronic mastitis,
E) All of the above.
22. In 2017, which state produced the most milk per cow?
A) Idaho, B) Wisconsin, C) South Dakota, D) Washington, **E) Michigan**.
23. What trait is defined as deep and wide showing capacity for vital organs, with well sprung fore ribs on the Dairy Cow Unified Scorecard?
A) Front End, B) Heart Girth, C) Dairy Strength, **D) Chest Floor**, E) Body Capacity.
24. What is known as the use of technologies to measure physiological behavioral, and production indicators on individual animals to improve management strategies and farm performance?
A) On site dairy production, **B) Precision dairy farming**, C) GMOs, D) DHIA,
E) Individual cow side dairy farming.
25. Examples of the type of farming described in #24 are:
A) Pedometers, B) Accelerometers, C) Milk Conductivity indicators, D) Daily body weight measurements, **E) All of the above**.
26. A benefit of the type of farming described in #24 is?
A) Decreased efficiency, B) Increased Costs, **C) Improved animal health and well-being**, D) Less objective observations, E) None of the above.
27. What metabolic disorder is caused by a deficiency of blood calcium related to an imbalance of calcium, phosphorus, and Vitamin D?
A) Parturient paresis, B) Ketosis, C) Grass Tetany, D) Fatty Liver, E) Displaced Abomasum.
28. As a cow's lactation begins, the disorder described in # 27 usually occurs how many hours after calving?
A) Less than 12 hours, **B) 24 to 72 hours**, C) 80 to 120 hours, D) more than 120 hours,
E) Immediately after birth.
29. F.F.A Dairy has turned out their high producing cows on lush, green pastures earlier this spring. The herds person went to get the cows for milking and noticed the cows exhibiting an uncoordinated gait, nervousness, muscle spasms, staggering, and after milking decreased milk yield. What could be causing these symptoms?
A) Parturient paresis, B) Ketosis, **C) Grass Tetany**, D) Fatty Liver, E) Displaced Abomasum.
30. The condition described in #29 is caused by a deficiency in what?
A) Magnesium, B) Calcium, C) Phosphorus, D) Potassium, E) Protein.
31. 80% of the stomach is made up by this compartment where fermentation occurs and carbon dioxide and methane are produced.
A) Abomasum, B) Omasum, C) Reticulum, **D) Rumen**, E) Duodenum.

32. What is the process called that heats raw milk to 161 degrees Fahrenheit for 15 seconds to destroy any disease producing bacteria that might be present?
A) Pasteurization, B) Clarification, C) Equalization, D) Homogenization, E) Standardization.
33. What dairy breed has been noted to have the following strengths: high fertility, young age at first calving, calving ease, and excellent heat tolerance?
A) Guernsey, B) Milking Shorthorn, C) Ayrshire, D) Brown Swiss, **E) Jersey**.
34. If you are providing water in the return alley from the milking parlor for cows, how many linear feet of watering space is required per cow?
A) 6 inches, B) 1 foot, C) 18 inches, **D) 2 feet**, E) 40 inches.
35. What disaccharide is formed from the combination of glucose and galactose?
A) Fructose, B) Sucrose, **C) Lactose**, D) Glucagon, E) Lactase.
36. Recently your cows have been experiencing less production, lower butterfat, and sick cows that never seem to recover. What could be the cause of these symptoms?
A) Ketosis, B) Milk Fever, C) Johne's, D) Hardware, **E) Rumen Acidosis**.
37. Which of the following would be considered a voluntary reason for culling a dairy cow?
A) non-breeder, B) mastitis, **C) low production**, D) crippled, E) All of the above.
38. The freezing point of milk can be altered by adding water to milk. What instrument is used to determine the freezing point of milk?
A) Brix refractometer, B) Thermometer, C) pH Meter, D) Plate Meter, **E) Cryoscope**.
39. Which condition is a result of the fetal membranes remaining within the uterus for an extended period of time after calving?
A) Retained Placenta, B) Involution, C) Separation of tissues, D) Metritis, E) Endometritis.
40. SPC is a measure of bacteria counts in milk. What do the letters SPC stand for?
A) Standard plate count, B) Somatic pasteurization count, C) Secondary preliminary count, D) Super plate count, E) Super preliminary count.