

Phase B 5 Questions Correct answers are worth 10 points each.

Only the team being asked the questions is to be in the room. Each team will be asked these 5 questions. Answers are to be given by a team captain, but assistance may come from any team member. A question may be repeated only once. Answers must be started within 20 seconds. Partial credit may be given at the discretion of the judges. After one team has been questioned, the other team will enter the contest room and be asked the same 5 questions.

1. In the ruminant digestive system, which one of the following is the name of the first section of the small intestine that is connected to the abomasum?

- a) duodenum b) jejunum c) ileum d) colon

ANS: a) duodenum

2. Your heifer calf weighs 100 pounds at birth and 460 pounds at 180 days of age. Calculate your heifers' average daily gain (ADG).

ANS: 2 pounds per day ADG

Calculation: 460 pounds minus 100 pounds birth weight = 360 pounds of gain;
360 pounds of gain divided by 180 days of age = 2.0 pounds per day ADG.

3. In reference to digestion and metabolism, which one of the following describes "heat increment"?

- a) NE_L b) the energy used up in the consumption, digestion and metabolism of a feed
c) the total amount of energy in a feed determined by bomb calorimetry

ANS: b) the energy used up in the consumption, digestion and metabolism of a feed

4. Research has shown that by formulating lactating cow rations with proper amounts of certain amino acids, we can decrease the crude protein content of the ration and reduce which one of the following:

- a) bloat b) acidosis c) metritis d) nitrogen excretion to the environment

ANS: d) nitrogen excretion to the environment

5. In order to prevent bloat, the feed additive Poloxalene is often added to feed rations for cows that are grazing. Which of the following grazed forages are most likely to cause bloat?

- a) fescue and orchardgrass b) wheat and barley c) alfalfa and clover

ANS: c) alfalfa and clover

Phase C 20 Questions Correct answers are worth 15 points each.

Both teams are in the room for Phase C. The first contestant to signal will answer the question within 5 seconds after being acknowledged by the moderator. Failure to do so will cost that team 10 points. Any contestant answering a question without being acknowledged by the moderator will lose 10 points. If an answer is incorrect, members of the other team will have the opportunity to answer the question without having it reread except for true/false, either or and yes or no type questions. If an answer is given in these types of questions, the question will be replaced with a tie breaker question, and given to the other team. No points are deducted for giving an incorrect answer. Team members are not allowed to discuss the answers in this phase. No partial credit is available in Phase C, except for bonus questions. If neither team can offer an answer to the question within 10 seconds, the moderator will give the answer and the question will be dropped but neither team will forfeit points.

1. Which one of the following often happens to the milk fat test percentage (or the butterfat test) when the lactating dairy cow is fed low levels of “effective fiber”?

- a) it increases b) it decreases c) it remains the same

ANS: b) it decreases

2. Which one of the following is the main reason why you should keep newborn calves separated from each other?

- a) to reduce fighting among the calves b) to prevent transmission of disease
c) to reduce labor costs

ANS: b) to prevent transmission of disease

3. Which one of the following is a true fat molecule that contains glycerol and three fatty acids?

- a) glycogen b) apoprotein c) mitochondria d) triglyceride

ANS: d) triglyceride

4. Which one of the following is an example of a mineral found in dairy cattle diets:

- a) biotin b) niacin c) potassium d) nitrogen

ANS: c) potassium

5. Which of the following best describes the term “alveoli” in the udder of a dairy cow?

- a) scar tissue b) a hormone c) keratin d) clusters of milk secreting cells

ANS: d) clusters of milk secreting cells

6. The official placing on a class of cows is 3-4-2-1 with cuts of 3-4-6. Your placing is 4-3-1-2. What is your score?

ANS: 41

7. When a calf nurses milk, what is the function of the esophageal groove?

ANS: the esophageal groove diverts the milk so that it flows to the abomasum

8. Which one of the following is the term that describes the act of calving or giving birth?

- a) milk fever b) lactation c) parturition d) gestation

ANS: c) parturition

9. Which one of the following should be part of the milking protocol to help prevent mastitis?

- a) keeping the milk in the bulk tank below 38° F b) teat dipping
c) using artificial insemination

ANS: b) teat dipping

10. What is the name of the test conducted on milk samples as a screening test for brucellosis?

ANS: “Ring” test

11. What dairy product is being made when whey is recovered as a by-product?

ANS: Cheese

12. Which one of the following minerals decreases in the blood when a cow comes down with milk fever?

- a) selenium b) zinc c) calcium

ANS: c) calcium

13. Which one of the following is the approximate percentage of solids in normal milk?

- a) 20% b) 25% c) 13% d) 5%

ANS: c) 13%

14. Which one of the following problems is caused when a baby calf has scours, and not enough fluids are absorbed from the intestinal tract?

- a) chelation b) rumination c) dehydration

ANS: c) dehydration

15. Which one of the following is the number of upper front teeth in a dairy cow?

- a) 5 b) 12 c) 15 d) none

ANS: d) none

16. Which one of the following describes the function of the Cooperatives Working Together (CWT) program?

- a) an international program used to market whey protein
b) a national dairy farmer-funded program that is used to help stabilize milk prices
c) a state-wide program that addresses the cost of dairy feeds

ANS: b) a national dairy farmer-funded program that is used to help stabilize milk prices

17. On a milking machine, if the milk to rest pulsation ratio is set at 60:40, what percent of the time is the inflation closed?

ANS: 40%

18. Many dairy farmers enroll their herds in the DHI milk testing and record-keeping program. What does DHI stand for:

ANS: Dairy Herd Improvement

19. Which one of the following is the name of the cow side test that uses a four-compartment paddle to test a sample of milk to identify cows with mastitis?

- a) CMT test b) ELISA test c) DHI test d) Johnes test

ANS: a) CMT test

20. When you enter the show ring with your dairy animal, should you walk clockwise or counterclockwise?

ANS: Clockwise

Bonus Questions Each bonus question is worth 20 points.

Bonus questions may be earned in the toss-up round. To receive a bonus question, 3 different team members must correctly answer the toss-up questions. Bonus questions are not passed to the other team, nor are points deducted for an incomplete or incorrect answer to the question. Bonus question will be asked whenever 3 team members have answered toss-up questions correctly with the count kept individually for both teams within a match. Eligibility for bonus questions does not carry over to another match. The answers must come from the team captain but assistance can come from the other team members. Only the number or answers required by the bonus question will be accepted. Example: If the bonus has a four-part answer - the first four answers given by the team will be accepted. Answers to a bonus question must start within 20 seconds and be completed within 60 seconds.

1. T/F

Because it is not organic in composition, sand is an excellent choice for bedding in free stalls.

ANS: True

2. What is the name of the waxy substance that is found in the teat duct (streak canal)?

ANS: Keratin

3. Name the county in North Carolina where the NCDA Piedmont Research Station is located.

ANS: Rowan County