

2013 Junior Dairy Quiz Bowl Questions

Round 04

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. What is the function of a regulator in a milking system?

- a) keeps the temperature of the milk in the bulk tank at 38 degrees F
- b) keeps the pulsators running at the correct speed
- c) keeps the vacuum at a constant level

ANS: c) keeps the vacuum at a constant level

2. What abnormal metabolic condition can be caused by feeding too much calcium in the dry period?

ANS: milk fever (also accept hypocalcemia and parturient paresis)

3. Name four of the six classes of nutrients.

ANS: proteins, carbohydrates, lipids (fats or oils), vitamins, minerals, water

4. Neutral Detergent Fiber (NDF) is composed of:

- a) Vitamins A, D, E, and K
- b) cellulose, hemicellulose and lignin
- c) d) rumen-undegradable protein (RUP)

ANS: b) cellulose, hemicellulose and lignin

5. A young calf needs energy to maintain body functions under normal temperature conditions, which for the dairy calf ranges from 50 degrees F to 78 degrees F. What is this temperature range called?

- a) comfort range b) thermal-neutral zone c) heat index

ANS: b) thermal-neutral zone

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. What are the basic structural components of proteins called?

ANS: amino acids

2. How many points are assigned to rear feet and legs on the PDCA Dairy Cow Unified Score Card?

ANS: 20 points

3. How long is the life cycle for a fly, from egg to adult?

a) 100 days b) 50 days c) 10 days

ANS: c) 10 days

4. What is the largest operating expense on most dairy farms?

ANS: feed cost

5. A deficiency of what mineral in the diet leads to grass tetany or grass staggers, especially when cattle are grazing lush pasture?

ANS: magnesium

6. What infection causes milk somatic cell counts to increase?

ANS: Mastitis

7. How many double bonds are contained in the structure of a completely hydrogenated saturated fat?

ANS: none

8. What term describes the period of time between a cow's previous calving date and her most recent calving date?

ANS: Calving interval

9. What does MUN stand for?

ANS: Milk Urea Nitrogen

10. Who was the Professor at the University of Wisconsin who developed the butterfat test that was the basis for DHIA testing?

a) Dr. Pasteur b) Dr. Borden c) Dr. Westphalia d) Dr. Babcock

ANS: d) Dr. Babcock

11. In what country did the Brown Swiss breed originate?

ANS: Switzerland

12. What federal agency does FDA stand for?

ANS: Food and Drug Administration

13. Steve Troxler hold a very important State Government office in North Carolina. What office does he hold?

ANS: Commissioner of Agriculture

14. Which of the following feeds is not a good source of energy for dairy cows?

a) corn grain b) straw c) barley grain

ANS: b) straw

15. One gram of protein contains 4 kilocalories of energy. Which one of the following also contains 4 kilocalories of energy in one gram?

a) fat b) carbohydrate c) Vitamin D

ANS: b) carbohydrate

16. After peak milk production, the cow's milk production starts to decline. What is the rate of decline of this milk production curve called?

- a) negative energy balance b) positive energy balance c) feed efficiency d) persistency

ANS: d) persistency

17. Which one of the following is the term for a large and complex protein material that is capable of causing disease and that reproduces only inside a host cell?

- a) protozoa b) bacteria c) virus d) staphylococcus

ANS: c) virus

18. Which of the following is not digested by the dairy cow?

- a) cellulose b) hemicellulose c) lignin

ANS: c) lignin

19. What nutritional disease, caused by overfeeding grain, is most often associated with laminitis (founder) in dairy cows?

ANS: acidosis

20. Which of the following is the most common bacterium that causes chronic mastitis?

- a) E. coli b) Klebsiella c) Staph. aureus d) Strep. uberis

ANS: c) Staph. aureus

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. In dairy cattle, what describes a bolus of regurgitated food that is chewed and re-swallowed?

ANS: cud

2. A pH of 7.0 is neutral. Is a pH of 7.5 acidic or basic?

ANS: basic

3. Which of the following feeds contains the most protein?

a) wet brewer's grains b) wheat middlings c) corn gluten meal

ANS: c) corn gluten meal