

2003 Senior Dairy Quiz Bowl Questions Round 02

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. Name the four fat-soluble vitamins:

ANS: A, D, E, K

2. *Staphylococcus aureus* bacteria are associated with what cattle disease?

ANS: Mastitis

3. What is the chemical name that describes the heifer feed additives Rumensin (monensin) and Bovatec (lasalocid)?

ANS: Ionophores

4. What two simple sugars combine to form lactose?

ANS: glucose and galactose

5. On average, how many pounds of body weight per day should Holstein heifers gain from birth to 24 months of age?

a) 1.8 to 2.0 b) 1.0 to 1.2 c) 2.5 to 3.0 d) 3 to 4

ANS: a) 1.8 to 2.0

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 nutrient do lipases break down?

ANS: Fat (or lipids)

2. A deficiency of which one of the following minerals causes grass tetany?

a) Iron b) Phosphorous c) Magnesium d) Molybdenum

ANS: c) Magnesium

3. What is the name of the blister-like structure on the ovary that contains the egg before ovulation?

a) corpuscle b) follicle c) zygote d) chromosome

ANS: b) follicle

4. The somatic cell count in milk gives an indication of:

- a) a mastitis infection b) the mineral content**
c) the vitamin content d) the protein content

ANS: a) a mastitis infection

5. What buffering compound is routinely added to dairy rations to help prevent acidosis?

ANS: Sodium bicarbonate

6. Where did the Holstein breed originate?

ANS: Netherlands (also accept Holland)

7. What is the minimum standard for solids-not-fat of homogenized, whole milk according to the Pasteurized Milk Ordinance (PMO)?

a) 3.25% c) 12.5%

b) 8.25% d) 15%

ANS: b) 8.25%

8. What is the name of the gland that produces oxytocin?

ANS: Pituitary gland

9. Which of the following is highest in crude protein?

a) cottonseed meal b) fescue hay c) soybean hulls d) alfalfa silage

ANS: a) cottonseed meal

10. Which one of the following ingredients would you expect to find in a milk replacer?

a) soybean hulls b) dried whey c) cottonseed hulls d) wheat bran

ANS: b) dried whey

11. What is an "anthelmintic"?

a) a de-wormer b) an ionophore c) a treatment for mastitis

ANS: a) a de-wormer

12. In a dairy cow diet, as the level of fiber decreases, what happens to the energy level?

a) it increases b) it decreases c) it stays the same

ANS: a) it increases

13. This group of hormones, produced in the uterus, causes regression of the corpus luteum, and causes contractions of the uterus.

ANS: prostaglandins

14. On the PDCA Dairy Cow Unified Score card, how many points are assigned to the udder category?

a) 10 b) 15 c) 20 d) 40

ANS: 40

15. What is the name of the disease caused by *Mycobacterium paratuberculosis*?

ANS: Johne's (pronounced "yo-nees") disease

16. When a sperm with an X chromosome fertilizes an egg, what sex will the calf be:

ANS: Female

17. An oxidized flavor may develop in milk if there is a deficiency of this vitamin in the lactating cow's diet:

a) Vitamin A b) Vitamin C c) Vitamin D d) Vitamin E

ANS: d) Vitamin E

18. True or False

By law, whole milk sold in the grocery store must contain at least 3.25% milk fat.

ANS: True

19. Ovulation typically occurs how many hours after estrus?

ANS: 10-12 hours

20. What is the name of the milk producing cells in the mammary gland?

ANS: alveoli

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. How many 40 pound square bales are required to make 2 tons of hay?

ANS: 100

2. What does NE_L stand for?

ANS: Net energy for lactation

3. Which volatile fatty acid produced in the rumen is a precursor for glucose?

ANS: Propionate

4. What is the term used to describe the physical characteristics and performance of an individual?

ANS: Phenotype

5. When a cow is superovulated and the resulting developing embryos are transferred to unrelated recipient cows, the calves that are born will be:

a) unrelated b) full siblings c) identical

ANS: b) full siblings