

**2009 Senior Dairy Quiz Bowl Questions**

**Round 06**

**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 term for the process where in the presence of light, chlorophyll-containing plants convert carbon dioxide and other elements into carbohydrates and oxygen?**

ANS: Photosynthesis

**2. What is the name of the opening that the digesta flows through as it enters the omasum?**

**a) duodenum      b) jejunum      c) reticulo-omasal orifice      d) ileum**

ANS: c) reticulo-omasal orifice

**3. Write this down: Calculate the pounds of dry matter in one ton of corn silage that contains 35% dry matter:**

ANS: 700 pounds of dry matter

Calculation: 2000 pounds of silage times 35% = 700 pounds

**4. When formulating rations, nitrogen is a major consideration for dairy nutritionists. Which one of the following is the primary source of nitrogen that is added to the ration?**

**a) limestone      b) fat      c) water      d) crude protein**

ANS: d) crude protein

**5. Which one of the following is often responsible for a low milk fat test?**

**a) feeding hay      b) feeding cottonseed hulls      c) overfeeding crude protein  
d) low level of “effective fiber” in the ration**

ANS: d) low level of “effective fiber” in the ration

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 is the term for the condition that occurs in the udder following calving, when an excessive amount of lymph fluid accumulates between the skin and the secretory tissue of the udder?

ANS: Edema

2. Where does fertilization of the ova take place?

ANS: Oviduct

3. What does CLA stand for in reference to milk composition?

ANS: Conjugated Linoleic Acid

4. Dairy cattle are most comfortable within which of the following temperature ranges?

a) 50 to 55 degrees F      b) 70 to 75 degrees F      c) 30 to 35 degrees F

ANS: a) 50 to 55 degrees F

5. How many points are allotted for body capacity on the PDCA Dairy Cow Unified Score Card?

ANS: 10

6. How many servings of dairy products per day are recommended in the USDA Food Pyramid Guidelines?

a) 1      b) 2      c) 3      d) 4

ANS: c) 3

**7. What country has the highest population of dairy cows?**

- a) Brazil      b) United States      c) England      d) India

ANS: d) India

**8. What is the name of the gland that produces follicle stimulating hormone (FSH)?**

ANS: anterior pituitary gland (accept pituitary gland)

**9. If the milking machine milk to rest pulsation ratio is set at 55:45, what percent of the time is the inflation open?**

ANS: 55%

**10. What is the name of the liquid found in semen storage tanks on dairy farms that has a temperature of minus 320 degrees F (- 320 degrees F)?**

ANS: liquid nitrogen

**11. What is the primary protein found in milk?**

ANS: casein

**12. In addition to ammonia and carbon dioxide, what gas with the chemical structure CH<sub>4</sub> is produced in the rumen?**

ANS: methane

**13. In reference to dairy cattle reproduction, what is the term for a “fertilized egg”?**

ANS: zygote

**14. What is the term for a substance that, when introduced into the body, brings about an immune response by a specific antibody?**

- a) antigen      b) antioxidant      c) immunoglobulin

ANS: a) antigen

**15. What are the two most limiting amino acids for milk production?**

ANS: methionine and lysine

**16. A typical cow's internal body temperature peaks closest to which of the following times:**

- a) 6:30 a.m.    b) 11:30 a.m.    c) 6:30 p.m.    d) 11:30 p.m.**

ANS: d) 11:30 p.m.

**17. When is it most efficient for a dairy cow to regain body condition?**

- a) in early lactation            b) in late lactation            c) during the dry period  
d) in the first month after calving**

ANS: b) in late lactation

**18. What does "RUP" stand for in reference to dairy cattle nutrition?**

ANS: rumen undegradable protein

**19. When posing a dairy heifer in the show ring, the rear leg nearest the judge should in what position?**

- a) slightly forward            b) slightly backward            c) it does not matter**

ANS: b) slightly backward

**20. When raising dairy heifers, which of the following stages of growth is the most costly period?**

- a) 100 to 200 pounds            c) 700 to 800 pounds  
b) 300 to 400 pounds            d) 1200 to 1300 pounds**

ANS: a) 100 to 200 pounds

**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. What term refers to practices that prevent the introduction or spread of disease on the farm?**

ANS: Biosecurity

**2. What direction do you move when leading a dairy animal in the show ring?**

**a) clockwise              b) counter-clockwise              c) it does not matter**

ANS: a) clockwise

**3. When referring to genetic evaluations, what do the letters BLUP stand for?**

ANS: Best Linear Unbiased Prediction