

**2010 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. 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

**2. Which of the following is the name of the organization that is charged with evaluating genetic traits of dairy cattle?**

- a) Animal Improvement Programs Laboratory      b) Dairy Business Association  
c) Dairy Herd Improvement Association      d) World Dairy Expo**

ANS: a) Animal Improvement Programs Laboratory

**3. In reference to milk processing, what describes "the cost of turning milk into cheese"?**

- a) income over feed costs      b) somatic cell counts  
c) "make allowance"      d) amount of waste milk from treated cows**

ANS: c) "make allowance"

**4. What part of the cell is known as the powerhouse of the cell because of the amount of energy produced in this part?**

- a) villi      b) cell membrane      c) mitochondrion (or mitochondria)**

ANS: c) mitochondrion (or mitochondria)

**5. What hormone is released by the pineal gland in response to longer day length?**

ANS: Melatonin

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. Cellulose, hemicellulose and lignin are the components of:**

- a) acid-detergent fiber (ADF)
- b) crude protein
- c) neutral detergent fiber (NDF)
- d) rumen-undegradable protein (RUP)

ANS: c) neutral detergent fiber (NDF)

**2. What compartment of the ruminant stomach has a mucus lining to protect the surface from hydrochloric acid (HCL)?**

- a) rumen      b) reticulum      c) omasum      d) abomasum

ANS: d) abomasum

**3. In reference to dairy cattle genetics, which one of the following describes the term "reliability"?**

- a) the predictability of a genetic valuation      b) the marketability of a genetic valuation
- c) the accuracy of a genetic valuation

ANS: c) the accuracy of a genetic valuation

**4. What toxic compound is often formed when sorghum forage is damaged by frost?**

- a) nitrates      b) prussic acid      c) cellulase      d) inulin

ANS: b) prussic acid

**5. How many amino acids are considered to be essential in the dairy cow and are therefore required in the diet?**

ANS: 10

**6. When should cows that have been treated with antibiotics be milked?**

- a) first, before the rest of the herd
- b) last, after all healthy cows have been milked
- c) within their normal group

ANS: b) last, after all healthy cows have been milked

**7. Which of the following terms refers to scours?**

- a) brucellosis
- b) enteritis
- c) pneumonia
- d) acetonemia

ANS: b) enteritis

**8. How many points are allotted for Rear Feet and Legs on the new PDCA Dairy Cow Unified Score Card?**

ANS: 20

**9. On the average how much time each day does a dairy animal spend ruminating or cud chewing?**

- a) 1 to 2 hours
- b) 4 to 5 hours
- c) 7 to 10 hours

ANS: c) 7 to 10 hours

**10. What term describes the duration of light that an animal is exposed to in a day?**

- a) photosynthesis
- b) photoperiod
- c) photolumination

ANS: b) photoperiod

**11. Which of the following is a fat soluble vitamin?**

- a) Vitamin C
- b) Vitamin K
- c) Niacin
- d) Vitamin B12

ANS: b) Vitamin K

**12. Which of the following is a C4 or warm season grass?**

- a) fescue      b) alfalfa      c) bermuda      d) orchardgrass

ANS: c) bermuda

**13. One thousand (1000) pounds of milk should yield about how many pounds of hard cheese?**

ANS: 100 pounds of hard cheese

**14. What term is used to describe a calf that is born dead?**

ANS: Stillbirth or Stillborn

**15. In what city and state does the annual Jersey Jug Futurity take place?**

ANS: Louisville, Kentucky

**16. In an early lactation dairy cow, what happens to her body weight when she enters a positive energy balance phase?**

ANS: It increases

**17. What metabolic disease that occurs in early lactation dairy cows is often treated with propylene glycol?**

ANS: ketosis

**18. Which of the following is the main reason that dairy cattle nutritionists get concerned about the amount of lignin in forages?**

- a) cellulose              b) hemicellulose      c) vitamin A status  
d) lignin is not digestible by the dairy cow

ANS: d) lignin is not digestible by the dairy cow

**19. Who is considered to be the father of modern genetics?**

- a) Louis Pasteur      b) Gregor Mendel              c) Gustav DeLaval      d) Marie Curie

ANS: b) Gregor Mendel

**20. Carbon, hydrogen, oxygen and nitrogen are the four basic elements present in:**

- a) carbohydrates    b) lipids    c) protein    d) triglycerides

ANS: c) protein

**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 gas with the chemical structure CH<sub>4</sub> is produced in the rumen?**

ANS: methane

**2. What is the technical term for the class of chemicals used to kill internal parasites in cattle?**

ANS: Anthelmintics (also accept dewormers)

**3. Who invented the continuous cream separator in 1878?**

- a) Dr. Westphalia    b) Dr. Babcock    c) Dr. DeLaval    d) Dr. Pasteur

ANS: c) Dr. DeLaval