

2011 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 term is defined as the study of nucleotide sequences in the chromosomes of an animal to determine its genetic potential?

- a) geneology b) genomics c) endocrinology d) metabolics

ANS: b) genomics

2. Whether from natural mating or from artificial insemination, approximately how long do sperm live in the cow's reproductive tract?

- a) 2 hours b) 6 hours c) 10 hours d) 24 hours

ANS: d) 24 hours

3. In the first few months of gestation, if a cow gets infected with BVD, the resulting calf will become a PI animal. In reference to BVD, what do the initials PI stand for?

- a) preliminary incubation b) persistently infected c) pulmonary infected

ANS: b) persistently infected

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

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

ANS: b) neutral detergent fiber (NDF)

5. After peak milk production is attained, the cow's milk production starts to decline. What is the rate of decline or the steepness of the slope of the milk production curve called?

ANS: Persistency

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. At the end of a Holstein animal registration name, what do the letters E-T stand for?

ANS: Embryo Transfer

2. In the dairy cow, the volatile fatty acid propionate is the precursor for what energy molecule?

ANS: Glucose

3. In what stomach compartment does metal that is accidentally consumed by the cow accumulate?

ANS: Reticulum

4. The hormone prolactin initiates or signals the beginning of what?

ANS: lactation

5. What term describes the space that an animal considers its area of safety?

ANS: flight zone

6. What are the clusters of milk secreting cells in the udder called?

a) gland cistern b) alveoli c) nucleus

ANS: b) alveoli

7. Milking unit inflations typically have a useful life of how many milkings?

- a) 600 b) 1200 c) 1800 d) 2400

ANS: b) 1200

8. What is the name of the contractile tissue that, when stimulated by oxytocin, forces milk out of the alveoli in the mammary gland?

ANS: Myoepithelium (also accept myoepithelial cells)

9. What percentage of nitrogen do most proteins contain?

- a) 12% b) 16% c) 20 % d) 24%

ANS: b) 16%

10. Which hormone causes a cow to come into estrus or heat?

- a) progesterone b) oxytocin c) prostaglandin d) estrogen

ANS: d) estrogen

11. A lack of what mineral can lead to the deficiency called anemia?

ANS: iron

12. Carbon, hydrogen and _____ are the three basic elements contained in carbohydrates.

ANS: oxygen

13. The protein percentage of first milking colostrum is approximately:

- a) 1/2 that found in normal whole milk
b) two times that found in normal whole milk
c) 5 times that found in normal whole milk

ANS: c) 5 times that found in normal whole milk

14. In addition to scours, what is the other leading cause of death in young calves?

ANS: pneumonia

15. Regarding reproduction, what is the name of the condition in which a cow comes into heat every few days?

ANS: cystic

16. On average, which breed of dairy cow has the longest productive life?

ANS: Jersey

17. A cow is consuming 120 pounds of actual (as-fed) pounds of a total mixed ration (TMR) each day. This TMR contains 50% dry matter. How many pounds of dry matter is the cow consuming per day?

ANS: 60 pounds of dry matter

18. Sodium bicarbonate is routinely added to dairy rations as a _____.

ANS: buffer

19. Absorption of antibodies (immunoglobulins) from colostrum primarily takes place in which part of the newborn calf digestive system?

ANS: small intestine

20. In a milking system what is the function of the plate cooler?

- a) provide cooling to cows in the parlor
- b) cooling the fresh milk prior to it entering the bulk tank
- c) provide cooling to employees in the parlor

ANS: b) cooling the fresh milk prior to it entering the bulk tank

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. One thousand (2000) pounds of milk should yield about how many pounds of hard cheese?

ANS: 200 pounds of hard cheese

2. Predicted transmitting ability (PTA) for milk is:

- a) a method of comparing bulls of different breeds**
- b) a within breed comparison of a bull's offspring for milk**
- c) the increased dollar value of a bull's offspring's milk**

ANS: b) a within breed comparison of a bull's offspring for milk

3. What are the genes called that occupy corresponding loci in homologous chromosomes but affect the same character in different ways?

- a) RNA**
- b) oocytes**
- c) spermatozoa**
- d) alleles**

ANS: d) alleles