

2005 Senior Dairy Quiz Bowl Questions Round 03

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. On a feed ration report you see that the zinc concentration is listed as 40 ppm.

What does ppm mean?

ANS: Parts per million

2. Which volatile fatty acid (VFA) produced in the rumen is a precursor for glucose?

ANS: Propionate

3. Which nutrient is broken down by enzymes known as lipases?

ANS: Fat (or lipids)

4. What is the name of the process that breaks up the fat globules so that they are evenly distributed in the milk?

ANS: Homogenization

5. What dairy cattle disease can be caused by the bacteria *Staphylococcus aureus*?

ANS: Mastitis

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 of the following forages is classified as a legume?

a) fescue b) corn silage c) alfalfa d) sorghum

ANS: c) alfalfa

2. 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) identical c) full siblings

ANS: c) full siblings

3. Hominy feed, wheat middlings and distillers grains are examples of:

a) forages b) by-product feeds c) bentonites d) minerals

ANS: b) by-product feeds

4. Which compartment of the ruminant stomach has been punctured when a cow has “Hardware disease”?

ANS: Reticulum

5. On average, what should the average daily gain (ADG) be for Holstein heifers from birth to 24 months of age?

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

ANS: c) 1.8 to 2.0 pounds

6. Which of the following are the names of the three sections of the small intestine?

a) colon, gall bladder, appendix b) duodenum, jejunum, ileum

c) omasal orifice, cecum, colon

ANS: b) duodenum, jejunum, ileum

7. What do we call the first streams of milk stripped from the udder prior to milking?

a) residual milk b) alveoli c) foremilk d) lactation

ANS: c) foremilk

8. Which of the following are the three basic elements contained in carbohydrates?

a) carbon, nitrogen, hydrogen b) carbon, nitrogen, oxygen c) carbon, hydrogen, oxygen

ANS: c) carbon, hydrogen, oxygen

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

ANS: Sodium bicarbonate

10. When a herd develops a low milk fat test, the cause is often a deficiency of:

a) protein b) energy c) fiber d) selenium

ANS: c) fiber

11. The somatic cell count (SCC) in milk provides an indication of:

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

ANS: c) a mastitis infection

12. Cottonseed meal or whole cottonseed may contain a chemical compound that has been found to be toxic to dairy cattle when fed in excess. What is the name of this chemical?

a) calcium carbonate b) gossypol c) ascorbic acid

ANS: b) gossypol

13. You send a sample of corn silage from your trench silo to the lab for nutrient analysis. The report lists the dry matter of the silage at 34%. How many pounds of dry matter are in one ton (2000 pounds) of the silage?

a) 680 b) 320 c) 640 d) 2000

ANS: a) 680

14. What disease is caused by *Mycobacterium paratuberculosis*?

ANS: Johne's Disease

15. Drought-stressed forages, especially following a rain, can be toxic to dairy animals due to high concentration of:

a) phosphorous b) protein c) calcium d) nitrates

ANS: d) nitrates

16. The lining of the rumen is covered with finger-like projections that serve to increase the surface area for absorption of nutrients. What is the name of these finger-like projections?

a) crypts b) colon c) metatarsals d) papillae

ANS: d) papillae

17. Which mineral is associated with the prevention of goiter?

ANS: Iodine

18. What is the common name for the metabolic disorder acetonemia?

a) brucellosis b) ketosis c) leptospirosis

ANS: b) ketosis

19. Which of the following is the term for the total amount of energy that a feed contains that is determined by bomb calorimetry?

a) net energy b) heat increment c) gross energy d) digestible energy

ANS: c) gross energy

20. If a total mixed ration contains 55% dry matter, what percentage moisture does it contain?

ANS: 45% moisture

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. The milk replacer label shows that it contains 25% fat. How many pounds of fat will be contained in a 50 pound bag of the milk powder?

ANS: 12.5 pounds of fat

2. Which hormone is released from the anterior pituitary gland and stimulates follicular growth?

ANS: FSH or follicle stimulating hormone

3. Fifty (50) pounds of whole milk should yield about how many pounds of cheese?

ANS: 5