

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. Research has shown that by formulating lactating cow rations with proper amounts of certain amino acids, we can decrease the crude protein content of the ration and reduce which one of the following:

- a) bloat      b) acidosis      c) metritis      d) nitrogen excretion to the environment

ANS: d) nitrogen excretion to the environment

2. During the silage making (ensiling) process, which one of the following organic acids do we not want to be formed in the silo?

- a) lactic acid      b) acetic acid      c) butyric acid

ANS: c) butyric acid

3. Which one of the following is “a substance that, when introduced into the body, brings about an immune response by a specific antibody”?

- a) antioxidant      b) antigen      c) immunoglobulin

ANS: b) antigen

4. In the ruminant digestive system, which of the following is the name of the first section of the small intestine that is connected to the abomasum?

- a) duodenum      b) jejunum      c) ileum      d) colon

ANS: a) duodenum

5. In reference to feeding, which one of the following describes “heat increment”?

- a)  $NE_L$       b) the energy used up in the consumption, digestion and metabolism of a feed  
c) the total amount of energy that a feed contains that is determined by bomb calorimetry

ANS: b) the energy used up in the consumption, digestion and metabolism of a feed

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. In reference to milk pricing, what does the acronym MILC stand for?

ANS: Milk Income Loss Contract

2. SPC stands for Standard Plate Count. Which one of the following does this measure in milk?

a) Somatic cell count      b) Bacteria count      c) White blood cell count

ANS: b) Bacteria count

3. Which one of the following components of a corn plant is not digestible by the dairy cow?

a) cellulose      b) hemicellulose      c) lignin      d) corn kernel

ANS: c) lignin

4. Which one of the following describes Biotin ?

a) an amino acid      b) a trace mineral      c) a B-vitamin      d) a source of fiber

ANS: c) a B-vitamin

5. What is the name of the liquid found on dairy farms that is maintained at a temperature of minus 320 degrees F (-320 degrees F)?

a) liquid helium      b) liquid oxygen      c) liquid nitrogen

ANS: c) liquid nitrogen

**6. In reference to dairy cattle reproduction, which one of the following describes a follicle?**

- a) a corpuscle
- b) one of the uterine horns
- c) the cervix
- d) the blister-like structure on the ovary that contains the egg before ovulation

ANS: d) the blister-like structure on the ovary that contains the egg before ovulation

**7. Which one of the following describes the primary function of the omasum?**

- a) it traps nails or other sharp objects
- b) it functions to squeeze fluid out of the digesta
- c) it provides a large surface area for nutrient absorption
- d) it functions as a large fermentation vat

ANS: b) it functions to squeeze fluid out of the digesta

**8. Who is the current U.S. Secretary of Agriculture?**

ANS: Mike Johanns

**9. In a high producing dairy cow, what happens to her body weight when she enters a positive energy balance phase?**

- a) it increases
- b) it decreases
- c) it remains the same

ANS: a) it increases

**10. The CWT program stands for Cooperatives Working Together. Which of the following describes the function of this program?**

- a) an international program used to market whey protein
- b) a national dairy farmer-funded program that is used to help stabilize milk prices
- c) a state-wide program that addresses the cost of dairy feeds

ANS: b) a national dairy farmer-funded program that is used to help stabilize milk prices

**11. In which of the following feeds can gossypol be found?**

- a) corn grain
- b) alfalfa hay
- c) soybean meal
- d) cottonseed meal or whole cottonseed

ANS: d) cottonseed meal or whole cottonseed

**12. In reference to dairy cattle reproduction, which one of the following is a zygote?**

- a) the ovary    b) the uterus    c) the cervix    d) a fertilized egg

ANS: d) a fertilized egg

**13. Which one of the following often occurs when lactating dairy cows are not fed enough effective fiber?**

- a) low protein milk    b) low milk fat test    c) metritis    d) mastitis

ANS: b) low milk fat test

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

ANS: Anterior Pituitary Gland (accept pituitary gland)

**15. In the reproductive system of a dairy cow, what hormone is secreted by the corpus luteum?**

ANS: Progesterone

**16. Your heifer calf weighs 90 pounds at birth and 414 pounds at 180 days of age. Calculate your heifer's average daily gain (ADG).**

ANS: 1.8 pounds per day ADG

Calculation: 414 pounds minus 90 pounds birth weight = 324 pounds of gain;  
324 pounds of gain divided by 180 days of age = 1.8 pounds per day ADG

**17. Which one of the following is a true fat molecule that contains glycerol and three fatty acids?**

- a) apoprotein    b) triglyceride    c) glycogen    d) mitochondria

ANS: b) triglyceride

**18. In order to prevent bloat, the feed additive Poloxalene is often added to feed rations for cows that are grazing. Which of the following grazed forages are most likely to cause bloat?**

- a) fescue and orchardgrass    b) wheat and barley    c) alfalfa and clover

ANS: c) alfalfa and clover

19. The official placing on a class of cows is 3-4-2-1 with cuts of 3-4-6. Your placing is 4-3-1-2. What is your score?

ANS: 41

20. On a milking machine, if the milk to rest pulsation ratio is set at 60:40, what percent of the time is the inflation closed?

ANS: 40%

**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. BLAD is a hereditary disease in Holstein cattle. What does BLAD stand for?

ANS: Bovine Leukocyte Adhesion Deficiency

2. Five hundred (500) pounds of whole milk should yield about how many pounds of cheese?

ANS: 50

3. Which of the following is the most costly disease in dairy cattle:

a) foot rot    b) acidosis    c) mastitis    d) metritis

ANS: c) mastitis