

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. True or False

An embryo with two X chromosomes will result in a female calf.

ANS: True

2. About how many additional pounds of milk will a cow produce if she consumes 1 more pound of feed dry matter?

- a) 0 to 1 b) 2 to 3 c) 5 to 6 d) 8 to 10

ANS: b) 2 to 3

3. On a feed ration report, you see that the copper concentration is listed as 10 ppm. What does ppm stand for?

ANS: parts per million

4. What is the term used to describe the total protein in a feed?

ANS: Crude protein

5. Which one of the following describes the process of homogenization in milk?

- a) clarification b) pasteurization
c) the manufacturing process that distributes the fat evenly throughout milk

ANS: c) the manufacturing process that distributes the fat evenly throughout milk

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. SPC is a measure of bacteria counts in milk. What do the letters SPC stand for?

- a) Standard Plate Count b) Somatic Pasteurization Count c) Second Preliminary Count
d) Super Plate Count

ANS: a) Standard Plate Count

2. Which gland produces the hormone oxytocin?

ANS: Pituitary gland

3. What is the name for a sterile heifer that is born twin to a bull?

ANS: Freemartin

4. Distillers grains, wheat middlings and hominy feed are examples of:

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

ANS: c) by-product feeds

5. What is the name of the most desirable acid produced during silage fermentation that functions to preserve the corn silage stored in a silo?

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

ANS: b) lactic acid

6. Which one of the following sections of North Carolina has the greatest number of dairy cows?

- a) Piedmont b) Mountains c) Coastal Plain

ANS: a) Piedmont

7. What is the name of the hormone that is secreted by the corpus luteum (yellow body)?

- a) testosterone b) progesterone c) adrenaline (epinephrine) d) oxytocin

ANS: b) progesterone

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

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

ANS: d) foremilk

9. Which one of the following hormones is critical in the initiation and maintenance of lactation:

- a) oxytocin b) estrogen c) prolactin

ANS: c) prolactin

10. In the first month after calving, which of the following normally happens to the body weight of a lactating dairy cow?

- a) the cow gains weight b) the cow loses weight c) her weight remains the same

ANS: b) the cow loses weight

11. You purchase one ton (2000 pounds) of dairy feed that contains 22% protein. How many pounds of protein did you buy?

- a) 220 pounds b) 440 pounds c) 22 pounds d) 2000 pounds

ANS: b) 440 pounds

12. On a DHIA record, what describes the number of “days from calving until first breeding date”?

- a) days open b) days to first service c) days dry

ANS: b) days to first service

13. What is the common name for the disease BSE (Bovine Spongiform Encephalopathy)?

ANS: Mad Cow Disease

14. What dairy breed is traditionally known for producing milk with the highest percentage of milk fat and milk protein?

ANS: Jersey

15. In a dairy cow, which of the following is the normal range in the length of the estrous cycle?

- a) 14 to 16 days b) 18 to 24 days c) 28 to 32 days

ANS: b) 18 to 24 days

16. The condition called "navel-ill" in a calf will often result in swelling and inflammation in what part of the body:

- a) joints b) eyes c) head

ANS: a) joints

17. What is the term for the disease “undulant fever” when it affects cattle?

ANS: brucellosis

18. What is the common name for the metabolic disease “acetonemia”?

- a) hardware disease b) blackleg c) circling disease d) ketosis

ANS: d) ketosis

19. Which hormone is necessary for the maintenance of pregnancy in a dairy cow?

ANS: Progesterone

20. Who is the current Commissioner of Agriculture in North Carolina?

ANS: Steve Troxler

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. Which compartment of the ruminant stomach functions in a similar manner as the human stomach?

- a) Rumen b) Reticulum c) Omasum d) Abomasum**

ANS: d) Abomasum

2. Which of the following causes Blackleg in cattle?

- a) a virus b) a fungus c) a bacterium**

ANS: c) a bacterium

3. How many servings of dairy products per day is recommended for people in the new USDA food pyramid guidelines?

- a) 1 b) 2 c) 3 d) 4**

ANS: c) 3