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. Grade A milk that is used to make ice cream is classified into which of the following classes?
   a) Class 1  b) Class 2  c) Class 3  d) Class 4

ANS: b) Class 2

2. Distillers grains is a by-product feed that results from the production of which one of the following:
   a) wheat flour  b) ethanol  c) molasses  d) corn gluten meal

ANS: b) ethanol

3. The National Agricultural Statistics Service (NASS) conducts monthly surveys to determine dairy cow numbers and milk production. Which of the following branches of the Federal government is NASS a part of?
   a) U.S. Census Bureau  b) Food and Drug Administration (FDA)
   c) Internal Revenue Service  d) U.S. Department of Agriculture (USDA)

ANS: d) U.S. Department of Agriculture (USDA)

4. Which of the following is the name of the part of a cow’s back that lies between the withers and the loin?
   a) rump  b) thurl  c) poll  d) chine

ANS: d) chine

5. It is most efficient for a dairy cow to regain body condition during this stage of the lactation cycle:
   a) dry period  b) early lactation  c) late lactation  d) in the first month after calving

ANS: c) late lactation
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 one of the following can cause an oxidized flavor to develop in milk?
   a) feeding bypass protein   b) a deficiency of Vitamin E in the ration   c) low milk fat test
   ANS: b) a deficiency of Vitamin E in the ration

2. Which one of the following is the main reason for including cottonseed meal in a dairy ration?
   a) to increase the level of energy   b) to provide a source of supplemental protein   c) to increase the effective fiber level
   ANS: b) to provide a source of supplemental protein

3. In reference to dairy and livestock farms what does CAFO stand for?
   ANS: Concentrated Animal Feeding Operations

4. Sexed semen is recommended for use in which one of the following groups of dairy cattle?
   a) older cows   b) heifers   c) all cows, regardless of age, that are in standing heat
   ANS: b) heifers

5. According to the Pasteurized Milk Ordinance (PMO), what is the minimum standard for solids-not-fat of homogenized whole milk?
   a) 3.25%   b) 8.25%   c) 12.25%   d) 15.25%
   ANS: b) 8.25%
6. In the process of artificial insemination (A.I.) on a dairy cow, what section of the reproductive tract does the inseminating rod pass through before the semen is deposited?

   a) fallopian tubes   b) oviduct   c) uterine body   d) cervix

ANS: d) cervix

7. In North Carolina, which one of the following is a weather-related management issue that has a great effect on milk production during the summer?

   a) scours   b) acidosis   c) rainfall   d) heat stress

ANS: d) heat stress

8. In reference to feed analysis, what do the initials “NPN” stand for?

ANS: Non-protein nitrogen

9. The Bt gene has been inserted into corn using transgenics. From what does the Bt gene protect the corn plant?

ANS: European Corn Borer

10. Approximately how many pounds of cheese can be made from 10 pounds of whole milk?

   a) 20   b) 10   c) 2   d) 1

ANS: d) 1

11. What is the name of the foundation that provides the majority of the funding support for the North Carolina Dairy Youth Program?

ANS: North Carolina Dairy Youth Foundation

12. In a newborn calf, which stomach compartment is the largest relative size (as a percentage of the total stomach capacity)?

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

ANS: d) abomasum
13. Which one of the following is not classified as a water-soluble vitamin?
   a) biotin    b) folic acid    c) niacin    d) Vitamin A
   ANS: d) Vitamin A

14. What is the name of the stomach disorder in which the cow's fourth stomach compartment twists out of normal position?
   a) acidosis    b) ketosis    c) displaced abomasum (DA)    d) milk fever
   ANS: c) displaced abomasum (DA)

15. Which one of the following can be used on the farm to measure the quality of the colostrum before feeding?
   a) a thermometer    b) a colostrometer    c) a pH meter
   ANS: b) a colostrometer

16. Which one of the following functions to alternate vacuum and atmospheric pressure in the space between the teat cup shell and the liner on a milking machine?
   a) the vacuum regulator    b) the compressor    c) the pulsator
   ANS: c) the pulsator

17. What is the term for the disease brucellosis when it affects humans?
   ANS: undulant fever

18. How many pounds of dry matter are contained in one ton (2000 pounds) of corn silage that contains 67% moisture?
   ANS: 660 pounds of dry matter (2000 pounds multiplied by 33% dry matter)

19. Which of the following are the three primary volatile fatty acids (VFA) produced in the rumen?
   a) methionine, lysine and tryptophan    b) acetate, propionate and butyrate
   c) methane, ammonia and choline
   ANS: b) acetate, propionate and butyrate
20. What disease in dairy cattle does BLV stand for?

ANS: Bovine Leukosis Virus

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. In reference to dairy cattle nutrition, what does “RUP” stand for?

ANS: rumen undegradable protein

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

ANS: Steve Troxler

3. Which one of the following is not a B vitamin:

a) biotin  b) niacin  c) folic acid (folate)  d) carotene

ANS: d) carotene