

**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. What brings about an immune response by a specific antibody?
  - a. Antigen
2. What are the genes called that occupy corresponding loci in homologous chromosomes but affect the same character in different ways?
  - a. Alleles
3. A cow will mobilize fat to meet the needs for this nutrient
  - a. Energy
4. If a cow has an interdigital foot infection, where is it?
  - a. Between the toes
5. What is the BioPRYN blood test for?
  - a. Pregnancy
6. The disease hypocalcemia is more commonly referred to as this:
  - a. Milk fever (also accept parturient paresis)
7. What dairy breed is afflicted with genetic disorders of BLADS, mulefoot, and DUMPS?
  - a. Holsteins
8. What is the name of the part of the bulk milk tank that stirs the milk to facilitate cooling and to provide a uniform mixture for sampling?
  - a. The agitator

9. Gregor Mendel is considered to be
- The first person to discover pasteurization
  - The father of modern genetics
  - The person who invented the first automatic milking machine

ANSWER: b. the father of modern genetics

10. What vitamin is needed for blood clotting?
- Vitamin K
11. What is the name of the vein located on the side of the cow's neck that is often used for intravenous injections?
- Jugular vein
12. What is the name of the milk that remains in the mammary gland following the completion of milking?
- Residual milk
13. Who is the current Secretary of Agriculture for the United States of America?
- Sonny Perdue
14. In vertebrate animals, which organ of the body makes cholesterol?
- Liver
15. Which of the following is the protein hormone that is associated with ovulation?
- Cortisol
  - Adrenaline
  - Somatotropin
  - LH

ANSWER: d. LH

16. What is the term for the fetal membrane, which surrounds the developing calf?
- Amnion
17. What is the term that describes when a straw of semen is thawed and then subjected to cool temperatures before reaching the cow?
- Cold shocked
18. Assuming that weather conditions and rainfall have been good, what has the most effect on the quality of forage?
- Stage of maturity at harvest
19. Biotin, in addition to increasing milk production, has a positive effect on which one of the following parts of a dairy cow?
- Lungs
  - Teats
  - Udder
  - Hoof

ANSWER: d. hoof

20. What is the wax-like material that lines the teat canal?
- Keratin