

## 2026 CALIFORNIA FFA DAIRY JUDGING QUESTIONS #1-200

(Sources Hoard's End of the Year Quizzes & Past National FFA Dairy Judging Questions)

1. This ingredient is an example of high-risk, high-cost shrink.
  - a. Cottonseed
  - b. Molasses
  - c. Beet pulp
  - d. **Soybean meal**
2. One pound of fat supplies how many times more energy than a pound of carbohydrates?
  - a. 3.25 times
  - b. 4 times
  - c. **2.25 times**
  - d. 3 times
3. Poor environments such as overcrowding, feed restriction, heat stress, and uncomfortable stalls will alter natural behaviors and constrain\_\_\_\_\_.
  - a. Bowel movements
  - b. Cycling
  - c. Chewing time
  - d. **Rumen fiber digestion**
4. This accounts for all nutrients in the forage, including protein, starch, sugar, fiber, and fat.
  - a. Total mixed ration (TMR)
  - b. Dry matter intake (DMI)
  - c. **Total digestible nutrient (TDN)**
  - d. Somatic cell count (SCC)
5. On an ad libitum basis, a dairy heifer will eat what percentage of her body weight in neutral detergent fiber (NDF) per day?
  - a. 1%
  - b. 5%
  - c. 10%
  - d. **0%**
6. What does TTSD stand for when discussing digestibility in dairy herds?
  - a. Total tract soybean digestibility
  - b. **Total tract starch digestibility**
  - c. Total tract sodium digestibility
  - d. None of the above
7. What percentage of supplemented copper is absorbed by adult cattle?
  - a. **10%**
  - b. 30%
  - c. 75%
  - d. 80%
8. These levels indicate a cow's metabolic response to a negative energy balance situation where fat is being mobilized.
  - a. **Beta-Hydroxybutyrate (BHB)**
  - b. Nonesterified fatty acids (NEFA)
  - c. Amino acid
  - d. None of the above
9. Too much of this can reduce calcium absorption.
  - a. Calcium
  - b. Amino acids
  - c. Starch
  - d. **Dietary phosphorus**

10. Cows fed cottonseed produce milk with how much more total fat per day?  
a. 0.2%                      b. 3%                      c. **5%**                      d. 10%
11. When grooving a floor, how big should the flat space in between the grooves be?  
a. 2 inches                      b. **2 ½ inches**                      c. 3 inches                      d. 5 inches
12. How many total licensed dairies were there in 2024?  
a. 23,560                      b. 24,005                      c. 24,587                      d. **24,810**
13. To help reduce lameness-related culls, early diagnosis is key. Using what technology?  
a. **3D cameras**                      b. Sprinklers                      c. Grooving                      d. Rubber mats
14. Check ladders, cages, chutes, unloaders, cables, and pulleys when doing maintenance on what?  
a. Bunker silo                      b. Silage Bag                      c. Silage Pile                      d. **Upright silo**
15. If a system vacuum is low for the liner being used, milking speed will be \_\_\_\_\_.  
a. Faster                      b. No change                      c. **Slower**                      d. None of the above
16. Adding these in strategic locations are vital cooling strategy.  
a. **Sprinklers and fans**  
b. Air conditioning  
c. Open lots  
d. None of the above
17. In 2024, the annual ventilation cost per cow was how much in Madison, Wis.?  
a. \$60                      b. **\$57**                      c. \$50                      d. \$45
18. How many inches of bunk space per cow in a freestall system with headlocks is recommended?  
a. 15 inches                      b. 20 inches                      c. 25 inches                      d. **30 inches**
19. These devices can track dairy cows in real time while generating data for future reference and decision-making.  
a. PC Dart  
b. **Precision monitoring**  
c. Feed technology  
d. None of the above
20. The first decision in designing an Automated Milking System (AMS) barn is selecting a \_\_\_\_\_.  
a. Grooving plan  
b. Ventilation  
c. **Traffic flow design**  
d. Feed pellet
21. What does WASDE stand for?  
a. Wisconsin Agricultural Supply and Demand Estimates  
b. **World Agricultural Supply and Demand Estimates**  
c. Washington Agricultural Supply and Demand Estimates  
d. Whole Agricultural Supply and Demand Estimates

22. Total domestic consumption of milk solids was up what percentage in 2024?  
a. 1.0%      **b. 1.2%**      c. 1.4%      d. 2.3%
23. Between 1990 and 2023, all steer dress weights jumped from 741 pounds in 1990 to how many pounds in 2023?  
a. **908**      b. 915      c. 930      d. 943
24. These prices are the input used to calculate the component value for other solids on milk checks.  
a. Protein      b. Butterfat      **c. Whey**      d. All of the above
25. DRP stands for what, and an effective way for dairy farmers is to manage price risk.  
**a. Dairy Revenue Protection**  
b. Dairy Risk Protection  
c. Dairy Rights Protection  
d. Dairy Rule Protection
26. The U.S beef cow inventory lowered to how many million cows in January 2025?  
**a. 39 million**      b. 37 million      c. 29.2 million      **d. 27.9 million**
27. From 1995 to 2024, domestic use of milkfat, in all its forms, rose what percent?  
a. 12%      **b. 18%**      c. 21%      d. 24%
28. This dairy product saw the largest gains with production up 14.5% compared to June 2024.  
**a. Cottage Cheese**  
b. Cheddar Cheese  
c. Yogurt  
d. Milk
29. The number of dairy cows on U.S farms rose to how many million head, up 159,000 from July 2024.  
a. 15.3      b. 13.35      **c. 9.49**      d. 1.3
30. This dairy product was named the lone bright spot in the dairy universe due to its recent popularity.  
a. **Whey**      b. Milk      c. Cheese      d. Yogurt
31. For high-producing cows, don't feed \_\_\_\_\_.  
**a. Raw soybeans**  
b. Distillers' grains  
c. High moisture corn  
d. All of the above
32. For alfalfa, the ideal soil pH is between  
a. 3.0-4.0      b. 5.0-6.0      **c. 6.8-7.1**      d. 8.1-9.8
33. If dealing with a sulfur deficiency, this is the most economical fertilizer to use as it contains roughly 18% sulfur.  
a. Potash  
b. Lime  
c. Phosphorus  
**d. Gypsum**

34. Salt concentrations on soil tests measure what in the soil?
- a. Sodium level
  - b. Electrical conductivity**
  - c. Nutrient levels
  - d. All of the above
35. In March, the leading marketer of this type of seed corn announced that it would begin to phase out the sales of these hybrids.
- a. Conventional
  - b. Brown midrib (BMR)**
  - c. Organic
  - d. Sweet Corn
36. Cutting corn silage higher may boost dry matter by how much percent?
- a. **2%**
  - b. 5%
  - c. 7%
  - d. 10%
37. This is a necessary plant component, present early in a plant's life to support water transport within the stem and structure later on.
- a. Stem
  - b. Water
  - c. Lignin**
  - d. Starch
38. Leaving a few more inches of stubble higher in the field reduced total yield and can also \_\_\_\_\_ corn silage quality.
- a. **Improve**
  - b. Decrease
  - c. Not change
  - d. None of the above
39. What are the four most common winter annual cereal grains used for forage?
- a. Corn, soybeans, wheat, sorghum
  - b. Sorghum, millet, oats, barley
  - c. Rye, triticale, wheat, barley**
  - d. None of the above
40. What is often called "the queen of forages"?
- a. Sorghum Sudan
  - b. Alfalfa**
  - c. Barley
  - d. Kentucky Bluegrass
41. The goal for heat treating colostrum is to reach a temperature of \_\_\_\_ for 60 minutes.
- a. 175°F
  - b. 160°F
  - c. 140°F**
  - d. 130°F
42. To reduce the risk of abuse, many farms use this as a handling aid in the fresh pen.
- a. Paddle
  - b. PVC pipe
  - c. Foam pool noodle**
  - d. Board

43. One potential drawback to cow-calf contact systems is prolonged exposure of newborn calves to adult cows \_\_\_\_?
- a. **Pathogens**
  - b. Mucus
  - c. Disease
  - d. All of the above
44. What percentage of formalin is recommended in foot baths?
- a. 2%
  - b. **3%**
  - c. 5%
  - d. 7%
45. Care during this period sets the stage for optimal lactation.
- a. Dry
  - b. Lactating
  - c. Weaning
  - d. **Transition**
46. Cows exposed to heat stress during the dry period potentially produce how many fewer pounds less milk per day in lactation compared to those provided with both evaporative cooling and shade?
- a. 5 pounds
  - b. 7 pounds
  - c. **11 pounds**
  - d. 15 pounds
47. Studies have shown that \_\_\_\_\_, particularly during late gestation, leads to significant longterm impacts on offspring.
- a. **Heat stress**
  - b. Dehorning
  - c. Mastitis
  - d. None of the above
48. A footbath should ideally be how many feet in length?
- a. 20 feet
  - b. 15 feet
  - c. **10 feet**
  - d. 7 feet
49. This practice removes bacteria from the teat skin when the teat canal remains open and the udder is most vulnerable.
- a. CMT paddling
  - b. Udder hair singing
  - c. Dry off
  - d. **Post-milking teat disinfection**
50. This serves as a fundamental contributor to the cow's emotional state.
- a. **Grooming**
  - b. Feeding
  - c. Hoof trimming
  - d. Dehorning
51. What is the main nerve that supplies the muscles that straighten the carpus (knee) and claws referred to as?
- a. Optic nerve
  - b. Gluteal nerve
  - c. **Radial nerve**
  - d. Hypoglossal nerve
52. Records from over 2 million Holsteins showed that cows with three or more lactations produced what percentage more milk than cows in their first lactation?
- a. 10%
  - b. 17%
  - c. 20%
  - d. **23%**

53. This prognosis affects the conjunctival tissue of the upper, lower, or third eyelid.
- a. **Cancer eye**
  - b. Tumor eye
  - c. Pink eye
  - d. Glaucoma
54. Abnormal manure during the first three weeks of life increases the likelihood of pneumonia later in the preweaning period by how much?
- a. **Double**
  - b. Triple
  - c. Quadruple
  - d. None
55. Cows naturally try to block bacteria from entering the teat canal by forming what?
- a. **Keratin plug**
  - b. Dry off
  - c. Dry teats
  - d. Mucus plug
56. Produced by Fusarium mold within contaminated corn or corn silage, this mimics the hormone estrogen and can cause multiple health issues.
- a. Black mold
  - b. Ochratoxin
  - c. **Zearalenone**
  - d. Aflatoxin
57. BLV stands for?
- a. Black leukemia virus
  - b. **Bovine leukemia virus**
  - c. Breed leukemia virus
  - d. None of the above
58. These vaccines contain a small amount of virus or bacteria that is altered so it does not cause disease, but the organism does replicate in the host's body.
- a. **Modified live**
  - b. Pink eye
  - c. Clostridial
  - d. All of the above
59. MBW stands for\_\_\_\_\_.
- a. Mature birth weight
  - b. **Mature body weight**
  - c. Mature bull weight
  - d. None of the above
60. Swelling and abscessation in the larynx usually due to an infection from the same bacteria that cause cheek abscesses is known as
- a. Scours
  - b. Swollen tongue
  - c. **Calf diphtheria**
  - d. Pneumonia
61. Teat shape was associated with the occurrence of?
- a. **Clinical mastitis**
  - b. Metritis
  - c. Ketosis
  - d. All of the above

62. Studies showed that cows with lower body condition scores postpartum were more prone to?
- Clinical mastitis
  - Milk fever
  - Displaced abomasum
  - d. Reproductive inflammation and delayed ovulation**
63. In the current version of net merit (NM\$), fat yield represents this weight percentage, making it the most heavily weighted trait in the selection program.
- 27.5%
  - b. 28.6%**
  - 29.4%
  - 30%
64. This hormone is produced by the preovulatory follicle.
- Testosterone
  - b. Estradiol**
  - Oxytocin
  - Somatostatin
65. After ovulation, the corpus luteum forms and produces this hormone that is necessary for pregnancy maintenance in cattle.
- Testosterone
  - Mastitis
  - Estrogen
  - d. Progesterone**
66. An obvious advantage of fresh conventional semen is due to its low sperm numbers, consisting of generally how many sperm?
- a. 3 to 5 million**
  - 1 to 3 million
  - 6 to 8 million
  - 10 to 12 million
67. AFC stands for
- Age at final calving
  - Age at fifth calving
  - c. Age at first calving**
  - None of the above
68. Optimal conception rates for a double ovulation program are possible at how many hours after the final injection?
- 10 to 12 hours
  - b. 13 to 23 hours**
  - 25-36 hours
  - 36-48 hours
69. \_\_\_\_\_ is defined as the percentage of cows in heat that are identified as being in heat.
- Chalking
  - Heat detection accuracy
  - c. Heat detection efficiency**
  - None of the above
70. Producers generally use rectal palpitation at how many days?
- a. 40 through 90 days**
  - 20 through 40 days
  - 10 through 20 days
  - None of the above

71. Rumen development in calves is stimulated by the production of what substances during feed digestion?  
a. Carbohydrates   b. Methane   c. Papillae   **d. Volatile fatty acids**
72. Rations are formulated on a dry matter basis and then weighed and mixed on what basis?  
a. **As-fed**   b. Dry matter   c. Parts per million   d. Total mixed ration
73. A total mixed ration should be mixed for about how long?  
a. 10 to 15 minutes  
**b. 3 to 5 minutes**  
c. 30 seconds  
d. Up to a half hour
74. Beet pulp contains roughly what percent sugar on a dry matter basis?  
a. **15%**   b. 30%   c. 55%   d. 70%
75. Homofermentative inoculants contain bacteria that mostly produce lactic acid. The bacteria in heterofermentative inoculants produce lactic acid plus what other substance?  
**a. Acetic Acid**  
b. Butyric Acid  
c. Propionic Acid  
d. Valeric Acid
76. The second, 8-millimeter sieve of the Penn State Particle Separator reflects the effective fiber in a ration. What is the goal for the share of the ration that remains on this level?  
a. Approximately 10%  
b. Between 33% and 50%  
**c. Over 50%**  
d. Under 25%
77. In regard to dairy cattle nutrition, what does MP stand for?  
a. Magnesium production  
b. Malleable pectin  
c. Metabolic production  
**d. Metabolizable protein**
78. Dietary protein should be cut back if milk urea nitrogen (MUN) levels rise above how many milligrams per deciliter?  
a. 10   b. **14 to 16**   c. 20   d. 3 to 5
79. What is the most commonly fed source of magnesium?  
a. Calcium magnesium carbonate  
b. Calcium magnesium hydroxide  
**c. Magnesium oxide**  
d. Magnesium sulfate
80. Corn distillers grains result from what process being performed with corn?  
**a. Dry milling**   b. Fermentation   c. Oil refining   **d. Wet milling**
81. What is the recommended bunk space to provide per head for animals 4 to 8 months old?  
a. 12 inches   b. 3.2 inches   **c. 5.9 inches**   d. 9.7 inches



82. For most cows, a stall width of how many inches is sufficient?  
a. 30                      **b. 48**                      c. 60                      d. 72
83. What factors influence the efficiency of a rotary parlor?  
a. Length of milking  
b. Number of stalls  
c. Platform speed  
**d. All of the above**
84. What is a common platform speed used in rotary parlors?  
a. 1 minute per stall  
b. 1 second per stall  
c. 20 seconds per stall  
**d. 5 seconds per stall**
85. What type of radio have some car manufacturers planned to remove from their new models?  
a. **AM**                      b. FM                      c. Ham                      d. Satellite
86. What land grant university closed its dairy farm this year?  
a. Louisiana State University  
**b. South Dakota State University**  
c. University of Wisconsin-Madison  
d. Washington State University
87. Checking belts, cleaning dust, and lubricating fans can help them operate better. Poor maintenance can reduce motor efficiency by up to how much?  
a. 10%                      b. 20%                      c. 30%                      **d. 40%**
88. Grouping first-lactation animals separate from older cows provides what benefits?  
a. Less competition  
b. Limited stress  
c. Tailored management  
**d. All of the above**
89. Sidewall curtains on calf barns should be completely open once the temperature reaches what level?  
a. 65°F                      **b. 75°F**                      c. 83°F                      d. 90°F
90. What is the term for the ratio of the time milk is flowing to the total pulsation cycle?  
a. Milk flow ratio  
**b. Milk to rest ratio**  
c. Pulsator ratio  
d. Pump to pulse ratio
91. Dairy Margin Coverage (DMC) payments are calculated based on the margin between the All-Milk price and what?  
a. A farm's cost of production  
b. Average corn silage cost  
**c. Average feed cost**  
d. Class III price

92. Which state added the most new dairy cows in 2023?  
a. Michigan      **b. South Dakota**      c. Texas      d. Wisconsin
93. Which dairy product uses the biggest share of the milkfat produced in the U.S.?  
a. Butter      **b. Cheese**      c. Fluid milk      d. Ice cream
94. When was multiple component pricing first used by a federal milk marketing order?  
a. 1972      **b. 1988**      c. 1999      d. 2011
95. Milk's value is determined based on end-product pricing. What class price would milk that is processed into sour cream receive?  
a. Class I      **b. Class II**      c. Class III      d. Class IV
96. Which of the following would not fall under current assets on a balance sheet?  
a. Cash      b. Feed inventory      **c. Land**      d. Savings account balance
97. What is the top butter-producing state in the country?  
a. **California**      b. Idaho      c. Minnesota      d. New York
98. In business terms, what does LLC stand for?  
**a. Limited liability company**  
b. Limited loss corporation  
c. Low lease conglomerate  
d. Low liability contest
99. How many state and regional dairy checkoff organizations are in the U.S.?  
a. 12      **b. 16**      c. 4      d. 8
100. What share of Americans deal with lactose sensitivity or intolerance?  
a. One-half      b. One-quarter      **c. One-third**      d. Two-thirds
101. Most grasses should not be mowed lower than what stubble height?  
a. 2 inches      **b. 4 inches**      c. 6 inches      d. 8 inches
102. What was the top state for dry alfalfa hay production in 2023?  
a. **Idaho**      b. Iowa      c. Montana      d. New York
103. What type of soil works best for frost seeding?  
**a. Loam or clay-based**  
b. Peaty  
c. Sandy or chalky  
d. Silty
104. Compared to harvesting corn for grain, chopping corn for silage has what effect on removing nutrients from the soil?  
a. It depends on the growing season  
b. Removes fewer nutrients  
**c. Removes more nutrients**  
d. Removes the same amount of nutrients

105. Which of the following is a conservation strategy that can help soils sequester carbon?
- a. Cover crops
  - b. Diversified crop rotation
  - c. No-till
  - d. All of the above**
106. If a large group of small flies is observed on the shoulders and backs of cattle on pasture, what kind of fly pressure are you likely dealing with?
- a. Face flies
  - b. Horn flies**
  - c. House flies
  - d. Stable flies
107. What is an adequate pH for growing grass?
- a. 4.3
  - b. 6.2**
  - c. 7.9
  - d. 8.7
108. The goal for haymaking is to stop respiration before the first nightfall after cutting. At what moisture level does a plant stop burning sugar?
- a. 45%
  - b. 60%**
  - c. 70%
  - d. 90%
109. Alfalfa will not regrow if there are less than how many growing degree days between the last harvest and first hard frost?
- a. **200**
  - b. 275
  - c. 350
  - d. 400
110. What part of the alfalfa plant contains the most protein?
- a. Flower
  - b. Leaves**
  - c. Roots
  - d. Stem
111. What is a “lactating” cow, as defined by the Food and Drug Administration in its regulations for antibiotic usage?
- a. Any female currently giving milk (dry cows excluded)
  - b. Any female in the first 3 months of lactation
  - c. Any female over 20 months old**
  - d. Any female that has calved for the first time
112. Udder infections caused by what type of pathogen will respond to antibiotic treatment most often?
- a. **Bacteria**
  - b. Fungi
  - c. Parasite
  - d. Virus
113. Approximately what share of a cow’s milk requires alveolar contraction to be let down?
- a. 100%
  - b. 20%
  - c. 50%
  - d. 80%**
114. What temperature should milk be when it is delivered to preweaned calves?
- a. **100°F to 105°F**
  - b. 40°F
  - c. 55°F to 60°F
  - d. 85°F
115. In a breech calving, which part of the calf is presented first?
- a. Front feet
  - b. Head
  - c. Rear legs
  - d. Rump and tail**

116. In relation to moving cows, what reference term is used to describe the shoulder?
- a. Blind spot
  - b. Flight zone
  - c. Point of balance**
  - d. Pressure point
117. To be considered high-quality, colostrum will have an IgG concentration of at least how many grams per liter?
- a. 15
  - b. 20
  - c. 50**
  - d. 70
118. The use of wood products like shavings for bedding is associated with the presence of what mastitis-causing pathogen?
- a. Klebsiella**
  - b. Mycoplasma
  - c. Prototheca
  - d. Strep. Uberis
119. At what temperature can lactating cows begin to experience cold stress?
- a. 10°F
  - b. 20°F
  - c. 32°F**
  - d. 45°F
120. An X-ray is also referred to as what?
- a. MRI
  - b. Neuroradiology
  - c. Radiograph**
  - d. Ultrasound
121. What milk quality measure will be high if milk cooling procedures are not carried out effectively?
- a. Lab pasteurized count
  - b. Preliminary incubation**
  - c. Somatic cell count
  - d. Standard plate count
122. Horn-producing cells attach to the frontal bone of an animal's skull at approximately what age?
- a. 1 week
  - b. 10 weeks
  - c. 3 months
  - d. 6 weeks**
123. Heifers have a functional rumen by what age?
- a. 1 year
  - b. 2 to 4 months
  - c. 2 to 4 weeks
  - d. 6 to 8 months**
124. When does mammary development begin?
- a. 2 months old
  - b. At puberty
  - c. In utero**
  - d. Near calving
125. Roughly what percentage of their body weight do cows lose at calving, regardless of parity, due to the expulsion of the calf, placenta, and fluids?
- a. 11%**
  - b. 20%
  - c. 30%
  - d. 4%
126. Approximately how much of an animal's height growth is achieved in the first 6 months of life?
- a. Half**
  - b. One-quarter
  - c. One-third
  - d. Two-thirds

127. When is a calf's intestinal tract most permeable to absorb nutrients or other compounds?
- At one month old
  - At one week old
  - At or soon after birth**
  - At weaning
128. What effect does inflammation of the mammary gland acquired during the dry period have on a cow's colostrum?
- Higher protein content
  - Higher volume
  - Lower antibody levels**
  - Lower pathogen levels
129. Vitamin B3 is the B vitamin synthesized in the largest quantities by rumen microbes. What is another name for vitamin B3?
- Folate
  - b. Niacin**
  - c. Riboflavin
  - d. Thiamine
130. What disease broke out in dairy cattle in Europe this year?
- a. Bluetongue**
  - b. Highly pathogenic avian influenza
  - c. Johne's
  - d. Tuberculosis
131. When a cow is close to calving, where does the trigger signal for delivery come from?
- a. The calf**
  - b. The corpus luteum
  - c. The cow
  - d. The placenta
132. What reproductive process does the hormone prostaglandin stimulate?
- Involution
  - b. Luteolysis**
  - c. Parturition
  - d. Pregnancy
133. What genetic condition is abbreviated MW?
- a. Early onset muscle weakness**
  - b. Male wild type
  - c. Mulefoot
  - d. Weaver
134. Stage one of dairy cattle labor consists of elevated activity as the cervix dilates and the uterus begins contracting. It typically lasts how long?
- 15 to 30 minutes
  - b. 2 to 3 hours**
  - c. 5 hours
  - d. 8 hours
135. What percentage of the 15.5 million units of dairy semen domestically purchased by dairy farmers in 2023 was sexed semen?
- 22%
  - b. 54%**
  - c. 73%
  - d. 86%
136. Every dairy animal has about how many DNA base pairs?
- 120
  - 3 billion
  - c. 6 billion**
  - d. 60

137. At what temperature should semen be thawed?
- a. 45°F to 48°F    b. 55°F    c. 75°F    **d. 95°F to 98°F**
138. Blood pregnancy tests for dairy cattle measure pregnancy-associated glycoprotein (PAG) levels. What reproductive structure produces PAGs?
- a. Cervix
  - b. Corpus luteum
  - c. Placenta**
  - d. Uterus
139. In genetics, what does PTA stand for?
- a. Posited transformation ability
  - b. Positive trait approval
  - c. Predicted transmitting ability**
  - d. Predicted type aptitude
140. What occurs approximately 28 hours after the beginning of standing heat?
- a. Fertilization
  - b. Ovulation**
  - c. Uterine attachment
  - d. Uterine contraction
141. The leading environmental issues facing farmers are contamination of ground and surface waters by which two nutrients?
- a. Nitrogen (N) and Potassium (K)
  - b. Potassium (K) and Phosphorus (P)
  - c. Nitrogen (N) and Chlorine (Cl)
  - d. Nitrogen (N) and Phosphorus (P)**
142. Which measure on a feed analysis report is used as a predictor of feed intake
- a. **NDF**    b. Dry Matter    c. Protein    d. TDN
143. Which of the following factors influence the amount of water dairy cattle consume?
- a. Body size
  - b. Water quality
  - c. Milk production
  - d. All of the above**
144. Which solutions are commonly used as teat tips on dairy farms?
- a. Hydrogen peroxide
  - b. Chlorhexidine
  - c. Iodine
  - d. All of the above**
145. According to the PDCA Cow Unified Scorecard, which of the following is NOT a category on the scorecard?
- a. Body Capacity 10 pts**
  - b. Udder 40 pts
  - c. Feet and Legs 20 pts
  - d. Dairy Strength 25 points

146. One of your recently fresh cows is ill. She has been receiving a high grain, low roughage diet. The consistency of the small amount of manure she produces is "putty-like." Your veterinarian detects a "pinging" sound when using his stethoscope. What is the most likely diagnosis?
- a. **Left Displaced Abomasum**
  - b. Milk Fever
  - c. Ketosis
  - d. Rumen Acidosis
147. Dr. Gustaf de Laval was credited with inventing what important piece of equipment?
- a. **Centrifugal cream separator**
  - b. Calf hutch
  - c. Semen Tank
  - d. Rotary milking parlor
148. Which of the following is a part of the teat that milk passes through?
- a. **Streak canal**
  - b. Cervix
  - c. Pituitary
  - d. Oxytocin
149. An example of a Class IV use for milk would be to make
- a. Hard cheese
  - b. Ice cream
  - c. Chocolate Milk
  - d. **Butter**
150. One effective method to prevent milk fever in dry cow rations is to supplement with anionic salts. What type of electrical charge does an anion have?
- a. Positive
  - b. Neutral
  - c. **Negative**
  - d. They do not have a charge
151. What is one challenge to successfully applying anionic salts to dry cow diets?
- a. **Poor palatability**
  - b. Add too much energy to the diet
  - c. Results in the cow calving early
  - d. Decreases milk production
152. The ruminant stomach is comprised of 80% of this first compartment.
- a. Reticulum
  - b. Omasum
  - c. **Rumen**
  - d. Abomasum
153. Which dairy breed produces milk with the highest fat and protein content?
- a. Ayrshire
  - b. Brown Swiss
  - c. **Jersey**
  - d. Holstein
154. What is the name of the organization that resulted from the collaboration among industry partners, breed associations, AI companies, DHIA testing organizations and the dairy records processing centers?
- a. World Dairy Expo
  - b. Animal Improvement Programs Laboratory
  - c. Dairy Business Association
  - d. **Council on Dairy Cattle Breeding**

155. The local veterinarian has invited you to do a herd visit with him to determine why calves are experiencing illness. You are asked to observe the calves housed outside in individual calf hutches. Calves appear to be lethargic and dehydrated. You notice calves have watery stools that are brown, grey, or yellow in color. Calves are weak and depressed. Upon reviewing birth information, the most seriously affected calves average 2-4 days of age. The bedding appears wet and dirty in both the calf hutches and the maternity pen. The most likely cause for this condition is which of the following:
- a. Too much milk being fed
  - b. E.coli bacteria causing scours**
  - c. Antibiotic residues
  - d. Too much protein in the milk replacer
156. The dehydrated calves in #155 should be supplemented with which of the following:
- a. Fat
  - b. Protein
  - c. Electrolytes**
  - d. None of the above
157. One way to help prevent the incidence of the sick calves in #155 is to:
- a. Group calves together
  - b. Provide clean, dry, well-bedded calving pens and calf hutches**
  - c. Let the calf nurse on the cow immediately after calving
  - d. Feed more milk
158. Which of the following is NOT considered a micromineral?
- a. **Phosphorus**
  - b. Cobalt
  - c. Zinc
  - d. Iodine
159. The record of an animal's ancestry that provides genetic and performance information on an animal and its ancestors is commonly referred to as a?
- a. Family tree
  - b. Registration Paper
  - c. Breeding Chart
  - d. Pedigree**
160. What hormone can interfere with milk letdown when a cow becomes frightened or upset?
- a. Prolactin
  - b. Progesterone
  - c. Adrenaline (epinephrine)**
  - d. Oxytocin
161. In 2023, FFA Dairy will maintain an average SCC of 125,000 cells/ml in all 1st lactation cows. In this SMART goal, 125,000 cells/ml SCC, represents which part of the acronym?
- a. Specific
  - b. Measurable**
  - c. Attainable
  - d. Realistic
162. You call your local veterinarian to evaluate the reproductive status of your dairy cows. He uses an ultrasound machine to help determine what?
- a. Pregnancy
  - b. Sex of the embryo
  - c. Monitor cystic ovaries
  - d. All of the above**
163. If the MUN level is considered high, which nutrient is likely to be in excess?
- a. Carbohydrates
  - b. Vitamins
  - c. Minerals
  - d. Protein**



164. Recently, your cows have been experiencing less production, lower butterfat, and sick cows that never seem to recover. What could be the cause of these symptoms?
- a. Ketosis
  - b. Milk Fever
  - c. Johne's
  - d. Rumen Acidosis**
165. This vitamin is derived from carotenoids found in plants and serves a wide range of functions for the animal.
- a. Vitamin D
  - b. Vitamin C
  - c. Vitamin B12
  - d. Vitamin A**
166. Corn silage harvest was recently completed. Your nutritionist arrived to take a forage sample for analysis to determine a new ration formulation. You received the test report back. One number in particular that you are interested in knowing is the ADF value. What does ADF stand for?
- a. Area Dairy Forage
  - b. Active Digestible Fiber
  - c. Acid Detergent Fiber**
  - d. Available Digestible Forage
167. What does ADF measure in feed?
- a. Dry matter
  - b. How much cellulose, hemicellulose, and lignin are in the feed
  - c. How much water is in the feed
  - d. How much cellulose, lignin, and lignified nitrogen components are in the feed**
168. Ideally, how much ADF should make up a high-producing cow's ration?
- a. **18-21%**
  - b. <10%
  - c. 30-40%
  - d. >50%
169. What is the target for body condition score at calving and dry-off?
- a. 2.75
  - b. 3.0-3.25**
  - c. 4.0-4.25
  - d. 2.5
170. What is the most likely limiting nutritional requirement for a high-producing dairy cow?
- a. Water
  - b. Vitamins
  - c. Minerals
  - d. Energy**
171. Volatile fatty acids are the main products of carbohydrate digestion by rumen microorganisms. Which of the following are volatile fatty acids produced in the rumen?
- a. Acetate and Propionic acid**
  - b. Butyric and Hydrochloric Acid
  - c. Methionine and Acetate
  - d. Butyric Acid and Phosphorus
172. In early summer, you select the heifers you want to show. As you examine the animals, you notice signs on the face, neck and ears of what you believe to be a contagious disease caused by a fungus leading to an infection outside of the immune system of the heifers. This disease that invades the hair follicles and the outer layer of skin is commonly known as:
- a. Shipping Fever
  - b. Ringworm**
  - c. Black Leg
  - d. Pinkeye

173. The age of cattle most susceptible to the disease in #172 is?
- a. 1st lactation cows
  - b. Mature Bulls
  - c. Mature Cows
  - d. **Young animals (calves and heifers)**
174. Raw milk produced on the farm has which of the following milk quality tests performed at the milk plant?
- a. Sediment test
  - b. Antibiotic test
  - c. Preliminary incubation (PI) count
  - d. **All of the above**
175. FFA Dairy recently began making cheese on the farm. In order to get the milk to curdle, what coagulant made from an enzyme found in the inner lining of a calf's stomach is added to the milk?
- a. Coccidiosis
  - b. **Rennet (Rennin)**
  - c. IBR
  - d. Lactose
176. The purpose of this program is to show customers that the dairy industry is taking the very best care of cows and the environment, producing safe and wholesome milk, and adhering to the highest standards of workforce development. The name of the program is:
- a. **National Dairy FARM Program**
  - b. Farm Bill Program
  - c. Dairy Margin Coverage Program
  - d. Precision Dairy Farming
177. Through what process is carbon dioxide taken from the atmosphere and fixed as carbohydrates in plant material?
- a. Respiration
  - b. Transpiration
  - c. **Photosynthesis**
  - d. Photoperiod
178. Factors affecting a dairy herd's conception rate include which of the following?
- a. **All of the following**
  - b. Heat detection accuracy
  - c. Semen (bull) fertility
  - d. Herd (cow) fertility
179. Budgets, balance sheets and cash flow projections are valuable and essential management tools, but they do not tell the manager if the business is profitable. What is the only tool of farm business analysis that measures profitability?
- a. Bank Statement
  - b. Equity Statement
  - c. **Income Statement**
  - d. Schedule F

180. During a recent visit with your A.I. salesman, you are discussing the new bull proofs with her and want her help in selecting the best bulls to use on your heifers to improve PL. What does the acronym PL stand for?
- a. Production Lifetime
  - b. Productive Life**
  - c. Predicted Lifetime
  - d. Predicted Longevity
181. Consequences of inbreeding in dairy cattle are: \_\_\_\_\_.
- a. Decreased milk production
  - b. Decreased reproductive performance
  - c. Increased calf mortality
  - d. All of the above**
182. What are the two most common minerals used in footbaths on dairy farms that are actively involved in the formation of hard keratin in hooves?
- a. Copper and Zinc**
  - b. Copper and Biotin
  - c. Zinc and Iodine
  - d. Zinc and Calcium
183. Stephen Babcock was responsible for developing the Babcock Test in 1890 to detect what in milk?
- a. SCC
  - b. Protein
  - c. White blood cells
  - d. Milk fat content**
184. The USDA recently announced their Climate-Smart Agriculture and Forestry Partnership Initiative to fund \$1 billion in climate-smart practices from the CCC. What does CCC stand for?
- a. Climate Clean Corporation
  - b. Climate Central Committee
  - c. Climate Commodity Corporation
  - d. Commodity Credit Corporation**
185. What is a factor that influences the amount of water consumed by dairy cattle?
- a. Calving ease
  - b. Udder cleft
  - c. Water temperature**
  - d. Estrus
186. Your milk hauler has just completed picking up milk from your farm and the bulk tank is now empty. How often should the bulk tank be cleaned and disinfected?
- a. Every day
  - b. Every time it is emptied**
  - c. Twice a day
  - d. After every milking
187. Which of the following factors can cause variation in conception rates on a dairy farm?
- a. Heat Detection
  - b. Cow health
  - c. Semen handling
  - d. All are factors that cause variation in conception rates**

188. One of the common steps of preparing a cow to milk is forestripping because it helps to release oxytocin and aids in the detection of what type of mastitis?
- a. All forms of mastitis
  - b. Clinical**
  - c. Sub-clinical
  - d. Mycoplasma
189. It is your job on the farm to mix the milk replacer to feed the calves. Temperature is a critical component of mixing it properly. How should you check to make sure it has been mixed at the proper temperature?
- a. Feel
  - b. Brix-Refractometer
  - c. Colostrometer
  - d. Thermometer**
190. The National Animal Health Monitoring System surveyed dairy farmers to determine what the most common criteria used for weaning a calf was. The results found which of the following criteria to be most common?
- a. Weight
  - b. Height
  - c. Age**
  - d. Outside Temperature
191. The temperature outside in which a cow can maintain their own core body temperature without having to exert any extra effort to regulate either their heat loss or heat gain is called what?
- a. Photoperiod
  - b. Respiration
  - c. Estrus zone
  - d. Thermoneutral zone**
  - e. None of the above
192. A DHIA milk production record may be terminated if what has happened to the cow?
- a. Sold at the sale barn as a cull cow
  - b. Aborted
  - c. Died
  - d. All of the above are correct**
193. After reviewing your recent breeding history for the past month, you contact your nutritionist because you have identified the need to improve conception rates in your herd. She suggests you add what to your rations to improve conception rates because of larger ovarian follicles capable of producing more estrogen, larger corpus luteum and a decrease in embryonic loss?
- a. Fats**
  - b. Carbohydrates
  - c. Vitamins
  - d. Minerals
194. If the heat detection rate is 40% and the conception rate is 20%, what is the pregnancy rate?
- a. 15%
  - b. 20%
  - c. 60%
  - d. 8%**

195. In U.S. dairy herds the number 1 reason for culling dairy cows is?
- a. Low milk production
  - b. Lameness
  - c. Mastitis
  - d. Reproductive failure**
196. Which compartment of the ruminant stomach main function is the dehydration of partially digested feed?
- a. Reticulum
  - b. Omasum**
  - c. Rumen
  - d. Abomasum
197. Which of the following dairy breeds originated from a British Channel Island?
- a. Ayrshire
  - b. Brown Swiss
  - c. Guernsey**
  - d. Holstein
198. Gestation length in dairy cattle can vary due to which of the following factors?
- a. Breed of the cow
  - b. Season of the year
  - c. Number of calves carried
  - d. All of the following**
199. During a dairy farm visit with your FFA advisor, the dairy farmer asks you what might be wrong with his pre-weaned calves. He provides the following information for you from calves experiencing problems: black feces that looks like engine oil, loose stools, and a few calves have died as a result. Based on these symptoms and signs, you suspect which issue to be causing the problem?
- a. Abomasal ulcers**
  - b. Ketosis
  - c. Displaced abomasum
  - d. Feed Refusal
200. BioPRYN blood test used to determine what in dairy cattle?
- a. Pregnancy**
  - b. Nitrate toxicity
  - c. Mastitis
  - d. Dystocia