

New Mexico FFA Association

Dairy

1. The organization that keeps records on purebred dairy cattle is known as the _____ .

- (A) Dairy Cattle Association
- (B) Association of Purebred Dairy Cattle
- (C) Purebred Dairy Cattle Association
- (D) None of the above

2. The _____ is considered to be a dual purpose breed (used for both milk and beef production).

- (A) Milking Shorthorn
- (B) Ayrshire
- (C) Brown Swiss
- (D) Guernsey

3. _____ animals are those which are the result of mating a registered bull with a cow of mixed breeding.

- (A) Registered
- (B) Grade
- (C) Cull
- (D) None of the above

4. Animals that meet the requirements of the breed association and are recorded in the herd book of the association are called _____.

- (A) grade
- (B) cull
- (C) registered
- (D) none of the above

5. The _____ breed originated in Scotland.

- (A) Brown Swiss
- (B) Jersey
- (C) Ayrshire
- (D) Guernsey

6. The _____ may be any shade of cherry red (other colors may include mahogany - brown - or white mixed with red-mahogany - or brown).
- (A) Guernsey
 - (B) Ayrshire
 - (C) Holstein
 - (D) Jersey
7. Which of the following is a trend in the U.S. dairy industry?
- (A) Decline in dairy farms
 - (B) Increase in herd size
 - (C) Decrease in cow numbers
 - (D) production per cow has increased
 - (E) all of the above
8. A mature Ayrshire cow will weight about _____ pounds.
- (A) 1200
 - (B) 1300
 - (C) 1400
 - (D) 1500
9. A mature Ayrshire bull will weigh about _____ pounds.
- (A) 1200
 - (B) 1500
 - (C) 1800
 - (D) 2000
10. The _____ breed originated in Switzerland.
- (A) Brown Swiss
 - (B) Ayrshire
 - (C) Holstein
 - (D) Jersey
 - (E) none of the above
11. _____ are solid brown - ranging from light to dark with a black nose and tongue.
- (A) Guernsey
 - (B) Brown Swiss
 - (C) Milking Shorthorn
 - (D) Ayrshire

12. The mature Brown Swiss cow weighs about _____ pounds.

- (A) 1200
- (B) 1300
- (C) 1500
- (D) 1700

13. A mature Brown Swiss bull weighs about _____ pounds.

- (A) 2800
- (B) 2000
- (C) 1800
- (D) 2200

14. The _____ heifers mature more slowly than other dairy breeds.

- (A) Jersey
- (B) Brown Swiss
- (C) Guernsey
- (D) Ayrshire

15. _____ are the longest lived of the dairy breeds.

- (A) Ayrshire
- (B) Jersey
- (C) Guernsey
- (D) Brown Swiss

16. In 1920, the ratio of milk cows to humans in the United States was 1:4.9 (Cows:Humans); in 1990, the ration was _____ .

- (A) 1:5.6
- (B) 1:9.3
- (C) 1:16.2
- (D) 1:24.5

17. Brown Swiss average about _____ percent milk fat.

- (A) 3
- (B) 3.5
- (C) 4.3
- (D) 5

18. The dairy industry provides an estimated _____ of the beef consumed in the United States with these animals being marketed as weal calves, cull dairy cows and bulls and finished dairy heifers and steers.

- (A) 10%
- (B) 25%
- (C) 40%
- (D) 60%

19. Guernseys rank _____ in the total number of dairy cattle registered in the United States.

- (A) first
- (B) second
- (C) third
- (D) fourth

20. The _____ may be any shade of fawn with white markings with a clear or buff muzzle being preferred over smokey or black.

- (A) Guernsey
- (B) Brown Swiss
- (C) Ayrshire
- (D) Holstein

21. The mature Guernsey cow will weigh about _____ pounds.

- (A) 1100
- (B) 1200
- (C) 1300
- (D) 1350

22. The mature Guernsey bull will weigh about _____ pounds.

- (A) 1700
- (B) 1800
- (C) 1900
- (D) 2000

23. The _____ breed originated in Holland. It is a less populous breed of dairy cattle distinguished by a white belt which encircles the middle section of the body.
- (A) Hampshire
 - (B) Dutch Belted
 - (C) Red Holstein
 - (D) Belted Holland
24. Guernseys average about _____ percent of milk fat.
- (A) 3
 - (B) 3.5
 - (C) 4.5
 - (D) 5
25. One cow in _____ in the average U.S. dairy herd is replaced each year.
- (A) two
 - (B) four
 - (C) six
 - (D) eight
26. The _____ breed originated in the Netherlands.
- (A) Guernsey
 - (B) Brown Swiss
 - (C) Holstein
 - (D) none of the above
27. About 90 percent of all dairy cattle in the United States are of _____ breeding.
- (A) Brown Swiss
 - (B) Jersey
 - (C) Ayrshire
 - (D) Holstein
28. There are about _____ registered Holsteins in the United States.
- (A) 1,500,000
 - (B) 2,000,000
 - (C) 300,000
 - (D) 400,000

29. _____ are black and white.

- (A) Holsteins
- (B) Ayrshires
- (C) Jersey
- (D) none of the above

30. _____ are the largest of the dairy breeds.

- (A) Holsteins
- (B) Jerseys
- (C) Guernseys
- (D) none of the above

31. The mature Holstein cow weighs about _____ pounds.

- (A) 1350
- (B) 1400
- (C) 1450
- (D) 1500

32. The mature Holstein bull weighs about _____ pounds.

- (A) 1900
- (B) 2000
- (C) 2100
- (D) 2200

33. Holsteins rank _____ among the dairy breeds in average milk production per cow over 17,000 pounds.

- (A) first
- (B) second
- (C) third
- (D) fourth

34. When Christopher Columbus first arrived in America, there were no cows on the American Continent.

- (A) True
- (B) False

35. Holsteins average about _____ percent milk fat.

- (A) 3
- (B) 3.5
- (C) 4
- (D) 4.5

36. Holsteins rank _____ among the dairy breeds in total pounds of butterfat produced per cow.

- (A) first
- (B) second
- (C) third
- (D) fourth
- (E) fifth

37. The _____ are believed to have developed from cattle from Normandy and Brittany in France.

- (A) Jerseys
- (B) Guernseys
- (C) Brown Swiss
- (D) none of the above

38. _____ are cream to light fawn to almost black in color with black muzzle and black or white switch and tongue.

- (A) Jerseys
- (B) Holsteins
- (C) Ayrshires
- (D) none of the above

39. The mature Jersey cow will weigh about _____ pounds.

- (A) 1000
- (B) 1100
- (C) 1200
- (D) 1300

40. The mature Jersey bull will weigh about _____ pounds.

- (A) 1500
- (B) 1600
- (C) 1700
- (D) 1800

41. Jerseys rank _____ among the major dairy breed in average milk production per cow at 12,750 pounds.

- (A) first
- (B) second
- (C) third
- (D) fourth
- (E) fifth

42. Jerseys average about _____ percent milk fat.

- (A) 3.2
- (B) 3.7
- (C) 4.2
- (D) 4.7

43. Jerseys rank _____ among the major dairy breeds in average butterfat test % per cow.

- (A) first
- (B) second
- (C) third
- (D) fourth
- (E) fifth

44. The selection of desirable dairy animals for breeding and production is based upon which of the following?

- (A) Physical appearance
- (B) Health
- (C) Milk Production
- (D) Pedigree
- (E) all of the above

45. Conformation and dairy character of the animal is referred to as _____.

- (A) Type
- (B) Breeding
- (C) Pedigree
- (D) None of the above

46. A good way to evaluate bulls is on the basis of _____.

- (A) production records of their daughters
- (B) cows sired
- (C) their health
- (D) none of the above

47. In judging dairy cattle, the terms - femininity/vigor/stretch/scale/harmonious blending of all parts - refers to _____.

- (A) general appearance
- (B) dairy character
- (C) body capacity
- (D) mammary system

48. In judging dairy cattle the terms - strongly attached / well balanced / capacious - refer to _____.

- (A) general appearance
- (B) dairy character
- (C) body capacity
- (D) mammary system

49. In judging dairy cattle the terms - relatively large in proportion to size of animal / strength / vigor - refer to _____.

- (A) general appearance
- (B) dairy character
- (C) body capacity
- (D) mammary system

50. In judging dairy cattle the terms - evidence of milking ability / angularity / general openness - refer to _____.

- (A) general appearance
- (B) dairy character
- (C) body capacity
- (D) mammary system

51. Strength in the _____ improves the ability of the animal to move around and get up and down in stanchions and stalls.

- (A) knees
- (B) hocks
- (C) thurl
- (D) shoulders

52. The width of the _____ region affects the ease of calving.

- (A) pelvic
- (B) rib
- (C) tail
- (D) none of the above

53. Strong - springy _____ cushion the weight of the animal.

- (A) dew claws
- (B) pasterns
- (C) heels
- (D) hoofs

54. An udder which is still firm after milking is referred to as _____.

- (A) meaty
- (B) bloated
- (C) tissue
- (D) none of the above

55. Teats should be _____ inches long.

- (A) 1 to 2
- (B) 1.5 to 2.5
- (C) 3 to 4
- (D) 4 to 5

56. Which of the following are of major concern to the dairyman?

- (A) Infectious Bovine Rhinotracheitis
- (B) Bovine Virus Diarrhea
- (C) Parainfluenza
- (D) None of the above
- (E) All of the above

57. Mastitis is usually caused by bacteria which get into the udder through _____.

- (A) contaminated feed eaten by the animal
- (B) contaminated water drunk by the animal
- (C) the blood stream
- (D) the teat opening

58. The California Mastitis Test should be used at least _____.

- (A) once a week
- (B) once a month
- (C) twice a month
- (D) every two months

59. _____ is a condition in which the abomasum moves out of place in the abdominal cavity.

- (A) Displaced abomasum
- (B) Ketosis
- (C) Metritis
- (D) Milk fever

60. Poor appetite - reduced fecal discharge - diarrhea - dull / listless / thin appearance - and soft or pasty feces indicate _____.

- (A) ketosis
- (B) retained placenta
- (C) milk fever
- (D) displaced abomasum

61. _____ is a condition in which the placenta is not discharged within 12 to 24 hours after calving.

- (A) Retained placenta
- (B) Displaced abomasum
- (C) Ketosis
- (D) Metritis

62. Infection in the reproductive tract during pregnancy - stress at calving - and deficiencies of Vitamin A / E / Iodine / and Selenium may cause _____.

- (A) displaced abomasum
- (B) ketosis
- (C) Metritis
- (D) retained placenta
- (E) all of the above

63. _____ is a condition of low blood sugar level in dairy cows.

- (A) Milk fever
- (B) Ketosis
- (C) Metritis
- (D) Milk fever

64. Odor of acetone in breath/urine/and milk - cow becomes dull and listless - cow goes off feed shortly after calving - and loss of body weight all indicate _____.

- (A) Ketosis
- (B) Metritis
- (C) Retained placenta
- (D) Milk fever
- (E) none of the above

65. _____ is an infection in the uterus.

- (A) Ketosis
- (B) Milk fever
- (C) Metritis
- (D) Mastitis

66. Fever - loss of appetite - standing with back arched - and abnormal discharge from the vulva all indicate _____.

- (A) Ketosis
- (B) Displaced Abomasum
- (C) Milk fever
- (D) Metritis

67. _____ is caused by a shortage of calcium salts in the blood.

- (A) Milk fever
- (B) Mastitis
- (C) Metritis
- (D) Ketosis
- (E) none of the above

68. Staggering - cold skin/dry muzzle - paralysis - bloating - lies on brisket with head turned back toward side all indicate _____.

- (A) Milk fever
- (B) Metritis
- (C) Ketosis
- (D) none of the above

69. Symptoms of the acute form of _____ would include fever - difficult breathing - mouth and nose discharge - coughing - mouth ulcers - and diarrhea.

- (A) Anthrax
- (B) Blackleg
- (C) Brucellosis
- (D) Bovine Virus Diarrhea
- (E) none of the above

70. Lameness - swollen muscles - severe depression - fever - and inability to stand are all symptoms of _____.

- (A) Brucellosis
- (B) Blackleg
- (C) Foot Rot
- (D) Infectious Bovine Rhinotracheitis

71. Diarrhea - cold nose/legs and ears - shock - and sometimes death are all symptoms of _____ . This disease normally affects only young cattle.

- (A) Calf Enteritis (Scours)
- (B) Brucellosis
- (C) Pinkeye
- (D) Wooden Tongue

72. An important factor in the control of scours is _____ .

- (A) sanitation
- (B) Vitamin A
- (C) colostrum
- (D) not to overfeed the calf
- (E) all of the above

73. _____ is caused by a bacteria - fungi - and other organisms that enter the animal where the skin is broken. The first noticeable symptom is lameness.

- (A) Foot Rot
- (B) Brucellosis
- (C) Scours
- (D) Anthrax

74. Sanitation - paved lots - and spreading lime and 5% blue Vitriol in water and feed bunk areas will help to control _____ .

- (A) Black leg
- (B) Pinkeye
- (C) Foot Rot
- (D) Scours

75. _____ is more common in animals which are fed low-quality silage. Symptoms include dullness - fever - and animal wanders aimlessly in a circle.

- (A) Pinkeye
- (B) Anthrax
- (C) Listeriosis
- (D) Brucellosis
- (E) All of the above

76. _____ is a disease carried by insects that affects the eyes of the animal.

- (A) Lumpy Jaw
- (B) Pinkeye
- (C) Wooden Tongue
- (D) Ringworm

77. Animals infected with Pinkeye may be effectively treated with which of the following?

- (A) Sulfa Drugs
- (B) Antibiotics
- (C) Vitamin A
- (D) none of the above
- (E) A and B

78. A disease affecting the respiratory tract - most common to young animals is _____. Symptoms include fever - drooping head and ears - and watery eyes.

- (A) Pinkeye
- (B) Warts
- (C) Scours
- (D) Shipping fever

79. Vibriosis is usually spread by _____.

- (A) infected bulls during breeding
- (B) cuts or wounds in the skin
- (C) inhalation
- (D) contaminated feed or water
- (E) none of the above

80. The use of artificial insemination helps to prevent _____.

- (A) Pinkeye
- (B) Brucellosis
- (C) Vibriosis
- (D) Infectious Bovine Rhinotracheitis
- (E) all of the above

81. Applications of Glacial Acetic Acid - Iodine Tincture - Silver Nitrate - Castor Oil or Olive Oil may be used to treat _____.

- (A) Vibriosis
- (B) Wooden Tongue
- (C) Ringworm
- (D) Warts

82. _____ is a contagious skin disease which may spread to man. Symptoms include round/scaly patches which lack hair.

- (A) Warts
- (B) Ringworm
- (C) Scours
- (D) Blackleg

83. _____ is a chronic but seldom fatal disease to cattle causing economic losses as affected body parts are condemned when the animal is slaughtered.

- (A) Ringworm
- (B) Shipping Fever
- (C) Warts
- (D) Wooden Tongue
- (E) Scours

84. The _____ fly is about one-half the size of the housefly - gray-black in color - and clusters mainly about the back/withers/and belly of the animal.

- (A) horse
- (B) screwworm
- (C) horn
- (D) stable

85. The _____ fly is about the same size as the housefly - grayish in color - seven rounded - dark spots on top of abdomen and is mainly a problem in feedlots.

- (A) stable
- (B) horn
- (C) horse
- (D) black

86. _____ flies irritate cattle - transmit disease - and take large amounts of blood (20 or 30 can take one-third of a pint of blood in 6 hours).

- (A) Horse and Deer
- (B) Horn
- (C) Stable
- (D) Screwworm
- (E) All of the above

87. Draining swampy areas is a most effective method for controlling _____.

- (A) Black flies
- (B) Mosquitoes
- (C) Stable flies
- (D) Horse flies and Deer flies
- (E) A and D

88. The _____ fly is bluish-green with 3 black stripes on the back and is twice the size of the housefly. The maggots are pink.

- (A) Horse
- (B) Deer
- (C) Horn
- (D) Screwworm
- (E) Stable

89. The female _____ fly fees around the eyes and nose of cattle and is little larger than the housefly and about the same color.

- (A) face
- (B) black
- (C) screwworm
- (D) horn
- (E) none of the above

90. The cattle grub is the larval stage of the _____ fly.

- (A) heel
- (B) stable
- (C) face
- (D) horse
- (E) horn

91. _____ are larvae that burrow into the skin of cattle - migrate through the body - and chew holes through the skin for breathing.

- (A) Flatworms
- (B) Roundworms
- (C) Cattle Grubs
- (D) Ticks

92. Control of cattle grubs is best accomplished with _____.

- (A) Systemic Insecticides
- (B) Antibiotics
- (C) Sanitation
- (D) Sulfur Drugs

93. Symptoms of cattle with _____ include rough appearance - rubbing against fences and feed bunks - and hairballs left on fences.

- (A) ticks
- (B) mites
- (C) lice
- (D) ringworms

94. Symptoms of cattle with _____ include rubbing - scratching - restlessness - and small pinpoint areas on the skin which lose hair.

- (A) mites
- (B) ticks
- (C) lice
- (D) ringworm

95. _____ are bloodsuckers and transmit serious diseases among cattle. Symptoms include severe irritation - wax buildup - infection - and shaking and rubbing ears.

- (A) mites
- (B) ticks
- (C) cattle grubs
- (D) lice
- (E) all of the above

96. The _____ is the most serious of the roundworms found in cattle.

- (A) stomach worm
- (B) whipworm
- (C) lungworm
- (D) hookworm
- (E) nodularworm

97. _____ is an example of flatworms found in cattle.

- (A) Hookworm
- (B) Tapeworm
- (C) Deer Liver Fluke
- (D) All of the above
- (E) b or c

98. _____ is the condition of rapid fermentation in the rumen causing too much gas to be produced.

- (A) Bovine Pulmonary Emphysema
- (B) Founder
- (C) Bloat
- (D) none of the above

99. The major cause of bloat is _____.

- (A) eating too much green legume too fast
- (B) too high a level of concentrates in the feed
- (C) a buildup of bacteria in the rumen
- (D) b or c
- (E) all of the above

100. _____ is a condition which cattle may develop when grazing on pastures of tall fescue.

- (A) Bloat
- (B) Founder
- (C) Fescue Foot
- (D) Blackleg

101. _____ is a swelling of the tissue which attaches the hoof to the foot.

- (A) Founder
- (B) Bloat
- (C) Fescue Foot
- (D) Blackleg

102. _____ occurs most often when cattle are grazing on grass pastures that are deficient in magnesium.

- (A) Founder
- (B) Fescue Foot
- (C) Bloat
- (D) Grass Tetany

103. Metal and other foreign objects must be kept out of cattle areas because if swallowed can cause _____.

- (A) foundering
- (B) hardware disease
- (C) grass tetany
- (D) bloat
- (E) none of the above

104. The purpose of Federal Milk Marketing Plans is to _____.

- (A) encourage dairy farmers to freshen more cows during the fall.
- (B) encourage dairy farmers to freshen more cows during the spring.
- (C) encourage dairy farmers to produce less milk.
- (D) all of the above.

105. A little over 42 percent of the milk produced in the United States is used for _____ products.

- (A) fluid
- (B) cheese
- (C) butter
- (D) frozen dairy

106. About 60 percent of the cheese made in the United States is _____ type cheese.

- (A) American
- (B) Italian
- (C) Swiss
- (D) b or c

107. The production of butter uses about _____ percent of the milk produced in the United States.

- (A) 16
- (B) 20
- (C) 24
- (D) 28

108. The solid-non-fat part of the milk is used to produce _____.

- (A) nonfat dry milk
- (B) condensed skim milk
- (C) butter
- (D) cream
- (E) a and b

109. Increased competition from _____ has caused a lower demand for real dairy products.

- (A) goats
- (B) sheep
- (C) substitute dairy products
- (D) foreign countries

110. Almost _____ billion dollars worth of milk is produced each year on dairy farms in the United States.

- (A) 10
- (B) 15
- (C) 20
- (D) 30

111. _____ milk is produced under standards which make it acceptable for fluid use.

- (A) Grade A
- (B) Grade B
- (C) Grade C
- (D) Grade D

112. Milk must be maintained at a maximum of _____ degrees Fahrenheit until it is processed.

- (A) 40
- (B) 45
- (C) 50
- (D) 60

113. A farmer's milk cannot exceed _____ bacterial count per milliliter before it is mixed with other producer's milk.

- (A) 100
- (B) 1000
- (C) 10000
- (D) 100000

114. _____ milk is produced under standards which allow it to be used for manufacturing dairy products but not to be used for fluid milk consumption.

- (A) Grade A
- (B) Grade B
- (C) Grade C
- (D) Grade D

115. Homogenized milk - 2 percent milk - half and half - buttermilk - and low-fat milk are priced as _____ as Grade A milk.

- (A) Class 1
- (B) Class 2
- (C) Class 3
- (D) Class 4

116. Butter - dry milk - cheese - eggnog - cottage cheese - and yogurt are priced as _____ of Grade A milk.

- (A) Class 1
- (B) Class 2
- (C) Class 3
- (D) Class 4

117. Cheese (except cottage cheese) - dry milk and other processed dairy products are priced as _____ of Grade A milk.

- (A) Class 1
- (B) Class 2
- (C) Class 3
- (D) Class 4

118. Which of the following procedures would be followed to establish a federal order market?

- (A) Written application to the USDA
- (B) USDA investigation
- (C) Public Hearing
- (D) Producer approval by referendum
- (E) all of the above

119. The _____ can suspend provision of an order in an emergency or terminate an order if it no longer serves the purpose of the act.

- (A) Governor
- (B) Secretary of State
- (C) Secretary of Agriculture
- (D) Extension Agent

120. In most federal order markets, the price of Class 1-2 and 3 milk is based on the price of manufacturing milk (Grade B) in _____.

- (A) Minnesota
- (B) Wisconsin
- (C) Michigan
- (D) Illinois
- (E) a and b

121. The average price of Grade B milk in the Minnesota/Wisconsin series is determined each _____.

- (A) day
- (B) week
- (C) month
- (D) year

122. Prices are based on a standard of _____ percent milk fat.

- (A) 3.5
- (B) 4.0
- (C) 4.5
- (D) 5.0

123. Typically - when a Grade A producer's milk is used in more than one class of milk - he/she is paid a _____.

- (A) blend price
- (B) stipend
- (C) average milk price in the Federal Order Market
- (D) none of the above
- (E) a or c

124. The _____ supports the price of Grade B milk through purchasing butter - cheese - and nonfat dry milk.

- (A) Dairy Industry
- (B) Commodity Credit Corporation
- (C) Farmers Cooperatives
- (D) USDA

125. Milk imports have been generally less than _____ percent of total United States production.

- (A) 2
- (B) 4
- (C) 6
- (D) 8

126. Feed costs are about _____ percent of the total cost of producing milk.

- (A) 30 to 40
- (B) 40 to 50
- (C) 50 to 60
- (D) none of the above

127. Differences in milk production among cows are due to about _____ percent heredity and _____ percent environment.

- (A) 50-50
- (B) 25-75
- (C) 10-20
- (D) none of the above

128. Cows fed correctly use about _____ percent of feed for maintenance and _____ percent for milk production.

- (A) 20-75
- (B) 10-80
- (C) 50-50
- (D) none of the above

129. The cheapest source of nutrients needed by the cow is _____.

- (A) grains
- (B) protein feeds
- (C) roughage
- (D) a or c

130. Concentrates are fed to cows individually according to _____.

- (A) milk production
- (B) body weight
- (C) age
- (D) none of the above

131. The _____ is usually fed individually in mangers in stanchion barns or in the milking parlor during milking.

- (A) roughage
- (B) concentrate mix
- (C) a and b
- (D) none of the above

132. The practice of feeding higher levels of concentrate to challenge the cow to reach her maximum potential milk production is called _____.

- (A) high feeding
- (B) challenge feeding
- (C) lead feeding
- (D) b or c

133. Dry cows in good condition should get about _____ pound of concentrate per 100 pounds of body weight.

- (A) 1/4
- (B) 1/2
- (C) 3/4
- (D) 1

134. About three days after calving, the cow should be getting about _____ pounds of concentrate per 100 pounds of body weight.

- (A) 1
- (B) 1.5
- (C) 2
- (D) 2.5

135. In 1994, the Purebred Dairy Cattle Association revised the Dairy Unified Score Card. The revision gave udder what percentage?

- (A) 20
- (B) 30
- (C) 40
- (D) 50

136. In revising the Dairy Unified Score Card in 1994, one revision was eliminating General Appearance which was worth 35 points. Two new categories were made, each receiving 15 points; they are frame and _____.

- (A) fore udder
- (B) feet and legs
- (C) body
- (D) rear udder

137. Two or three weeks before calving, the cow should be receiving about _____ pounds of concentrate per 100 pounds of body weight.

- (A) .5
- (B) 1
- (C) 2
- (D) 3

138. After milk production drops - decrease ration by 1 pound of concentrate for each _____ pounds of milk production drop.

- (A) 1
- (B) 2
- (C) 3
- (D) 4

139. The _____ ration is one which has all or almost all of the ingredients blended together.

- (A) Free Choice
- (B) Complete
- (C) Challenge
- (D) none of the above

140. The most important feeds to be analyzed are the _____ used in the ration.

- (A) grains
- (B) roughages
- (C) supplements
- (D) none of the above

141. Cows should not be kept away from feed and rest for more than _____ hours.

- (A) 2
- (B) 3
- (C) 4
- (D) 5

142. Forages should be analyzed at least _____.

- (A) once a week
- (B) once a month
- (C) once every two months
- (D) twice a year

143. From _____ to _____ percent of the dry matter in the dairy ration should come from roughages.

- (A) 20-40
- (B) 40-60
- (C) 60-80
- (D) 80-90

144. Hay should be windrowed at about _____ percent moisture content to prevent high leaf loss.

- (A) 20 to 25
- (B) 25 to 30
- (C) 35 to 40
- (D) none of the above

145. Hay which is rain damaged has a (an) _____ feeding value compared to similar hay which is not rain damaged.

- (A) equal
- (B) higher
- (C) lower
- (D) none of the above

146. Because dairy cattle eat more high quality hay as compared to low quality hay _____ concentrate is needed to balance the ration when feeding low quality hay.

- (A) more
- (B) less
- (C) equal
- (D) none of the above

147. _____ is the best hay for dairy cattle use.

- (A) Alfalfa
- (B) Red Clover
- (C) Lespedeza
- (D) Millet

148. _____ yields more protein and TDN per acre than other hay crops.

- (A) Red Clover
- (B) Sweetclover
- (C) Johnsongrass
- (D) Alfalfa

149. _____ tends to be coarse and stemmy and is better as a pasture than for hay production for dairy cattle.

- (A) Alfalfa
- (B) Johnsongrass
- (C) Lespedeza
- (D) Sweetclover

150. _____ hay is very similar to alfalfa hay feeding value.

- (A) Lespedeza
- (B) Red Clover
- (C) Millet
- (D) Coastal Bermudagrass

151. A hay crop that is made into silage is called _____.

- (A) silage hay
- (B) green chop
- (C) haylage
- (D) none of the above

152. If the crop is too dry _____ may be added to reduce heat damage.

- (A) salt
- (B) propionic acid
- (C) calcium chloride
- (D) b or c

153. Materials such as ground grain - dried beet or citrus pulp - dried brewer's grains - or soybean flakes may be used as _____ in forage silage.

- (A) supplement
- (B) preservatives
- (C) dryers
- (D) none of the above

154. When cutting haylage, cutter knives should be set at _____ inch.

- (A) 1/4
- (B) 3/8
- (C) 3/4
- (D) 1

155. When filling silos with haylage, the wetter material should be put _____.

- (A) in the middle
- (B) on top
- (C) on bottom
- (D) evenly through the silo

156. _____ silage yields more energy per acre than other forages.

- (A) Sorghum
- (B) Coastal Bermudagrass
- (C) Corn
- (D) Small Grain

157. Sorghum silage is usually _____ in digestibility compared to corn silage.

- (A) lower
- (B) higher
- (C) equal

158. Harvesting Coastal Bermudagrass as silage is not recommended because _____.

- (A) storage loss in upright silos is high
- (B) the nutritional value is too low.
- (C) palatability and digestibility is too low
- (D) none of the above.

159. The nutritive value of small grain silages is _____ that of corn silage.

- (A) less than
- (B) more than
- (C) equal to

160. Grains are included in the dairy ration mainly for their _____ content.

- (A) energy
- (B) nutrient
- (C) vitamin
- (D) roughage

161. Usually - the most limiting factor in milk production is a shortage of _____ in the ration.

- (A) nutrients
- (B) energy
- (C) vitamins
- (D) roughage

162. Grains contain about _____ percent total digestible nutrients (TDN).

- (A) 40 to 50
- (B) 50 to 60
- (C) 60 to 70
- (D) 70 to 80

163. _____ is the most commonly used grain in dairy cattle rations.

- (A) barley
- (B) rye
- (C) oats
- (D) none of the above

164. _____ are usually the most expensive part of the ration.

- (A) roughages
- (B) small grains
- (C) protein supplements
- (D) vitamins

165. _____ is a protein supplement commonly added to ration for dairy cattle.

- (A) soybean meal
- (B) linseed meal
- (C) cottonseed meal
- (D) soybeans
- (E) all of the above

166. Milk is _____ percent water.

- (A) 80-83
- (B) 83-85
- (C) 85-87
- (D) 87-90

167. Locating dairy cows require _____ water in relation to their size than any other farm animal.
- (A) less
 - (B) more
 - (C) the same amount of
 - (D) none of the above
168. The first _____ is the most critical time for meeting nutritional needs of dairy cows.
- (A) 16 weeks of life
 - (B) 10 weeks after calving
 - (C) year
 - (D) 6 months of embryo development
169. _____ is the first milk produced by the fresh cow.
- (A) New Milk
 - (B) Lactation
 - (C) Colostrum
 - (D) Fresh Milk
170. _____ and _____ are two of the most important minerals needed when balancing dairy rations.
- (A) calcium - phosphorus
 - (B) salt - iodine
 - (C) zinc - magnesium
 - (D) none of the above
171. _____ refers to taking the digested parts of the feed into the bloodstream.
- (A) digestion
 - (B) absorption
 - (C) remnants
 - (D) none of the above
172. _____ are animals that have a stomach which is divided into several parts.
- (A) mammals
 - (B) ruminants
 - (C) non-ruminants
 - (D) b or c

173. The four parts of the _____ stomach are Rumen, Reticulum, omasum, and abomasum.

- (A) ruminant
- (B) non-ruminant
- (C) mammal
- (D) none of the above

174. _____ delays the time the heifer first reaches heat.

- (A) environmental temperature
- (B) underfeeding
- (C) overfeeding
- (D) a and b

175. _____ causes first heat to be reached earlier.

- (A) environmental temperature
- (B) overfeeding
- (C) underfeeding
- (D) ease of birthing

176. _____ shortages in the ration may cause silent heats or discontinued heats.

- (A) protein
- (B) calcium
- (C) salt
- (D) phosphorus

177. A shortage of phosphorus in the ration appears to cause _____.

- (A) irregular heat cycles
- (B) loss of appetite
- (C) silent heats
- (D) scours

178. The average gestation (length of pregnancy) for dairy cows is _____ days.

- (A) 180
- (B) 258
- (C) 283
- (D) 312

179. A _____ day variation in gestation is considered normal.

- (A) 10
- (B) 12
- (C) 14
- (D) 16

180. The cow should be dry for _____ weeks.

- (A) 4 to 6
- (B) 6 to 8
- (C) 8 to 10
- (D) 10 to 12

181. Which of the following methods will dry off the cow?

- (A) Stop milking her
- (B) do not milk her out completely the last few days
- (C) milk her every other day for several days
- (D) all of the above

182. What method is recommended in most cases to dry off the cow?

- (A) stop milking her
- (B) do not milk her completely the last few days
- (C) milk her every other day for several days

183. The developing calf will normally gain about _____ pounds during the last eight weeks of the gestation period.

- (A) 20
- (B) 30
- (C) 40
- (D) 50

184. Dry cows should gain no more than _____ pounds from late in the lactation to the next calving.

- (A) 70
- (B) 80
- (C) 90
- (D) 100

185. The afterbirth should be expelled within _____ after calving.

- (A) 48 hours
- (B) 24 hours
- (C) 1 hour
- (D) 30 minutes

186. Approximately _____ percent of the calves born each year are heifers.

- (A) 25
- (B) 40
- (C) 50
- (D) 65

187. An acceptable death loss of calves born each year is _____ percent.

- (A) 5
- (B) 10
- (C) 12
- (D) 15

188. _____ is a measure of the confidence which can be placed on the predicted difference being a true measure of the bull's transmitting ability.

- (A) predicted difference
- (B) repeatability
- (C) confidence interval
- (D) reliability

189. _____ is the expected 305-day equivalent production of milk and/or fat of the bull's daughters compared to genetic group herd mates.

- (A) predicted difference
- (B) repeatability
- (C) sire comparison
- (D) genetic comparison

190. Repeatability is based on which of the following factors?

- (A) number of daughters
- (B) number of records for each daughter
- (C) number of different herds in which the daughters are located
- (D) all of the above

191. The _____ is the best available estimate of the genetic value of a cow for breeding purposes.

- (A) pedigree
- (B) cow index
- (C) registration
- (D) dairy character

192. The breeding value of a bull too young to have milking daughters or a heifer too young to be in production may be calculated by a _____.

- (A) predicted difference
- (B) modified contemporary comparison
- (C) cow index
- (D) pedigree index

193. The _____ is the average of the predicted difference of the sire and the cow index of the dam

- (A) pedigree index
- (B) modified contemporary comparison
- (C) average index
- (D) none of the above

194. It is recommended that about _____ percent of the herd be bred to young bulls.

- (A) 20
- (B) 30
- (C) 40
- (D) 50

195. A goal of most dairy farmers is to have a calving interval of _____ months.

- (A) 9 to 10
- (B) 10 to 12
- (C) 12 to 13
- (D) 13 to 15

196. _____ is the process of introducing semen into the female reproductive organs without sexual contact.

- (A) artificial reproduction
- (B) line breeding
- (C) artificial insemination
- (D) nonsexual reproduction

197. _____ is the mating of close relatives.

- (A) line breeding
- (B) close-breeding
- (C) mate-breeding
- (D) inbreeding

198. The major problem with artificial insemination on the farm is _____.

- (A) storing the semen
- (B) the process of artificial inseminating the dam
- (C) detecting the cows in heat
- (D) none of the above

199. The average cow comes in heat every _____ days.

- (A) 18-19
- (B) 21-22
- (C) 24-25
- (D) 27-28

200. Cows should be observed for signs of heat at least _____ from day 17 to 25 after the last heat period.

- (A) once a day
- (B) twice a day
- (C) every two days
- (D) once a week

201. Dairy cows stay in heat an average of _____.

- (A) 18 hours
- (B) 24 hours
- (C) 36 hours
- (D) 48 hours

202. The egg is released from the ovary (ovulation) about _____ after the end of heat.

- (A) 3 hours
- (B) 6 hours
- (C) 11 hours
- (D) 18 hours

203. Conception is highest when insemination is done 12 to 18 hours _____.

- (A) before ovulation
- (B) after heat begins
- (C) before heat begins
- (D) after ovulation

204. It is recommended that most cows be bred _____ days after calving

- (A) 10 to 20
- (B) 30 to 40
- (C) 50 to 60
- (D) 70 to 80

205. To calve and therefore produce milk is referred to in the dairy business as _____.

- (A) calving
- (B) reproduction
- (C) freshening
- (D) birthing

206. To keep a high milk base - heifers should be bred to freshen in the _____.

- (A) spring
- (B) summer
- (C) fall
- (D) winter

207. Calves should be de-horned at the age of _____.

- (A) 1-2 weeks
- (B) 1-2 months
- (C) 3-4 months
- (D) 1 year

208. Extra teats are best removed when the calf is _____ old.

- (A) 1-2 weeks
- (B) 1-2 months
- (C) 3-4 months
- (D) 1 year

209. A type of clamp applied to teats which, when applied crushes the blood vessels causing the teat to fall off after a period of time is called a _____.

- (A) teat clamp
- (B) teat crusher
- (C) burdizzo
- (D) teat remover

210. Heavy service of dairy bulls is breeding _____ cows per year.

- (A) 10 to 20
- (B) 20 to 30
- (C) 30 to 40
- (D) 40 to 50

211. About _____ before calving, introduce the heifer to the milking herd routine.

- (A) 2 weeks
- (B) 1 month
- (C) 2 months
- (D) none of the above

212. Good sources of ideas for dairy facilities include _____.

- (A) state universities
- (B) cooperative extension service
- (C) high school agriculture education departments
- (D) other dairy farmers
- (E) all of the above

213. In the _____ type barn, each cow is confined to an individual stall and is held in a stanchion or a tie stall.

- (A) stall
- (B) free stand
- (C) none of the above

214. A _____ is a gas powered machine that chops a bale of bedding material as it is moved down the alley behind the cows.

- (A) bedding chopper
- (B) bedding baler
- (C) bale chopper
- (D) cattle bed maker

215. The _____ is an electrical device that forces cows to move back toward the gutter when defecating or urinating.

- (A) electric fence
- (B) cow trainer
- (C) shock wire
- (D) none of the above

216. A minimum of _____ foot candles of light is required by grade A regulations in all work areas during milking.

- (A) 10
- (B) 25
- (C) 50
- (D) 100

217. Which of the types of milking equipment are commonly used in stall barns?

- (A) pail milkers
- (B) suspension milkers
- (C) pipeline milkers
- (D) b and c
- (E) all of the above

218. The most popular type of milking parlor in current use is the _____.

- (A) herringbone
- (B) side-opening
- (C) rotary
- (D) polygon

219. _____ milking parlors are arranged with the cows standing parallel to the operator pit. Each cow enters and leaves the parlor individually.

- (A) herringbone
- (B) side-opening
- (C) rotary
- (D) polygon

220. _____ milking parlors are arranged so the cows enter onto a tuning platform.

- (A) side-opening
- (B) herringbone
- (C) polygon
- (D) rotary

221. Generally - the _____ milking parlor is arranged in a diamond shape.

- (A) polygon
- (B) herringbone
- (C) side-opening
- (D) rotary

222. The _____ is not considered a part of the milking system.

- (A) milking unit
- (B) pulsation system
- (C) vacuum supply system
- (D) milk flow system
- (E) none of the above

223. The _____ is attached to the udder of the cow.

- (A) milking unit
- (B) pulsation system
- (C) vacuum supply system
- (D) milk flow system

224. The _____ controls the action of the inflation.

- (A) milking unit
- (B) pulsation system
- (C) vacuum supply system
- (D) milk flow system

225. The _____ includes the vacuum pump - vacuum lines - vacuum tank - vacuum controllers - and gauges.

- (A) pulsation system
- (B) milking unit
- (C) milk flow system
- (D) none of the above
- (E) all of the above

226. The _____ includes the sanitary milk line - milk inlet valves - milk receiver jar and releaser - and milk pump.
- (A) milk flow system
 - (B) milking unit
 - (C) pulsation system
 - (D) vacuum supply system
227. Milk production begins to drop above _____ degrees F.
- (A) 40
 - (B) 50
 - (C) 60
 - (D) 70
228. A circular muscle, the _____, at the end of the teat controls the flow of milk.
- (A) sphincter muscle
 - (B) mammary ligament
 - (C) milk gland
 - (D) udder muscle
229. A cow's udder is made up of _____ glands on which there is one teat for providing milk.
- (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
230. The udder contains alveoli which _____.
- (A) carry blood throughout the udder
 - (B) destroy bacteria in the milk
 - (C) manufacture milk
 - (D) none of the above
231. The gland cistern holds about _____ of milk.
- (A) 8 ounces
 - (B) 16 ounces
 - (C) 2 pounds
 - (D) 3 pounds

232. A wide streak canal and a weaker sphincter muscle makes the cow _____.

- (A) nervous
- (B) highstrung
- (C) hard to milk
- (D) easier to milk

233. _____ occurs when the cow responds by a conditioned reflex to sensory stimuli such as washing the udder.

- (A) Relaxation
- (B) Teat leakage
- (C) Milk let-down
- (D) Milking

234. A hormone is released by the pituitary gland causing milk let-down. This hormone is called _____.

- (A) alveoli
- (B) oxytocin
- (C) sphincocin
- (D) None of the above

235. The effect of the oxytocin lasts about _____.

- (A) 5 to 7 minutes
- (B) 15 to 20 minutes
- (C) 25 to 30 minutes
- (D) 1 hour

236. About _____ percent of the milk is removed from the udder at each milking.

- (A) 50
- (B) 60
- (C) 70
- (D) 80

237. The milking machine should be attached within _____ after stimulating milk let down.

- (A) 10 seconds
- (B) 1 minute
- (C) 15 minutes
- (D) 30 minutes

238. Through milking time varies from cow to cow - usually a cow will milk out in _____ minutes.

- (A) 1 to 3
- (B) 3 to 6
- (C) 12 to 15
- (D) 15 to 18

239. Dipping the teats after milking will _____.

- (A) help stimulate milk let down for the next milking.
- (B) reduce new mastitis infections
- (C) reduce existing infections
- (D) sanitize the teat for the next milking

240. The major cost when milking three times per day is _____.

- (A) labor
- (B) housing
- (C) electrical
- (D) None of the above

241. When not properly cleaned _____ may build up on milking equipment to the point where it can be seen.

- (A) iron
- (B) bacteria
- (C) calcium
- (D) milkstone

242. Alkaline and chlorinated alkaline cleaners _____.

- (A) remove organic deposits from milking equipment
- (B) remove bacteria from the cow's udder
- (C) remove off flavors in milk
- (D) remove inorganic deposits from milking equipment

243. Acid cleaners are used to _____.

- (A) remove organic deposits from milking equipment
- (B) remove inorganic deposits from milking equipment
- (C) clean the cow's udder
- (D) remove off-flavors in milk

244. Milk should be cooled to _____ degrees Fahrenheit within 20 minutes after it is drawn from the cow.
- (A) 40
 - (B) 50
 - (C) 60
 - (D) 70
245. Milk should be cooled to _____ degrees Fahrenheit within 90 minutes after it is drawn from the cow.
- (A) 40
 - (B) 50
 - (C) 60
 - (D) 70
246. The most common off-flavor in raw milk is caused by _____.
- (A) cleaning materials
 - (B) disease
 - (C) feed
 - (D) water
247. Which of the following is not considered an off-flavor in milk?
- (A) Salty
 - (B) Sweet
 - (C) Malty
 - (D) Flat
248. Which of the following may cause off-flavors in milk?
- (A) Silage
 - (B) Weeds
 - (C) Moldy feeds
 - (D) Grasses
 - (E) All of the above
249. Cows should be removed from pasture _____ before milking
- (A) 30 minutes
 - (B) 1 to 2 hours
 - (C) 2 to 4 hours
 - (D) 4 to 6 hours

250. Too much agitation or cooling - warming - and recooling of milk can cause the milk to taste _____.

- (A) salty
- (B) malty
- (C) rancid
- (D) oxidized

251. A _____ flavor in milk is caused by adding water.

- (A) rancid
- (B) medicinal
- (C) barny
- (D) flat

252. Poor barn ventilation causes milk to taste _____.

- (A) rancid
- (B) barny
- (C) flat
- (D) salty

253. A _____ flavor in milk is caused by cows late in lactation or cows with mastitis.

- (A) salty
- (B) rancid
- (C) barny
- (D) oxidized

254. High bacteria counts cause milk to taste _____.

- (A) malty
- (B) barny
- (C) salty
- (D) oxidized

255. Chemical reactions in the milk cause it to taste _____.

- (A) oxidized
- (B) flat
- (C) rancid
- (D) malty

256. In 1999, there were approximately _____ milk cows in New Mexico.

- (A) 123,000
- (B) 137,000
- (C) 197,000
- (D) 204,000
- (E) 217,000

257. The three leading counties in New Mexico in dairy production (milk, cash receipts) in 1998 were _____, _____ and _____.

- (A) Bernalillo, Curry, Valencia
- (B) Bernalillo, Chaves, Roosevelt
- (C) Chaves, Curry, Lea
- (D) Chaves, Dona Ana, Roosevelt
- (E) Dona Ana, Eddy, Roosevelt

258. Average milk production per cow in New Mexico has increased from 7490 pounds per cow in 1965 to _____ pounds per cow in 1998.

- (A) 8,552
- (B) 13,815
- (C) 18,856
- (D) 20,065
- (E) 22,140

259. Total milk production in New Mexico during 1998 was _____ million pounds.

- (A) 3325
- (B) 3748
- (C) 4011
- (D) 4354
- (E) 5219

260. In New Mexico, wholesale milk products ranked _____ among all agricultural commodities in total dollars cash receipts during 1998.

- (A) 1st
- (B) 2nd
- (C) 3rd
- (D) 4th
- (E) 5th

261. Total agricultural income from dairy products in New Mexico during 1998 was over _____ million dollars.

- (A) 189
- (B) 234
- (C) 393
- (D) 526
- (E) 653

262. New Mexico ranked _____ in the nation in total milk cows and _____ in the nation in total milk production for 1998. In 1987, New Mexico ranked 35th and 32nd respectively.

- (A) 12th, 11th
- (B) 14th, 16th
- (C) 18th, 21st
- (D) 20th, 19th
- (E) 23rd, 18th

263. The two leading counties in New Mexico in the total production of alfalfa hay in 1998 were _____ and _____.

- (A) Chaves, Dona Ana
- (B) Chaves, Eddy
- (C) Chaves, San Juan
- (D) Dona Ana, Lea
- (E) Eddy, Curry

264. Dairy producers received an average price of \$_____ per 100 pounds for milk produced and sold wholesale in 1998.

- (A) 10.20
- (B) 11.70
- (C) 12.90
- (D) 13.80
- (E) 14.80

265. In 1998, the average yield per acre of alfalfa hay on farms in New Mexico was _____ tons.

- (A) 3.8
- (B) 5.1
- (C) 5.7
- (D) 6.0
- (E) 6.5

266. The Purebred Dairy Cattle Association's headquarters were moved to what major breed association?

- (A) National Holstein Association
- (B) The American Guernsey Association
- (C) The American Jersey Cattle Club
- (D) all of the above

267. What generation of Identified Holstein Females are eligible for the new Qualified Herdbook?

- (A) second
- (B) third
- (C) fourth
- (D) sixth

268. True or False: The use of artificial hair, except for false switches, is a minor violation of the Showring Code of Ethics?

- (A) True
- (B) False

269. As the price of casein rose in recent years, most major manufacturers of milk replacers replaced casein (from skim milk powder) with _____.

- (A) water
- (B) milkfat
- (C) whey products
- (D) Vitamins D and E

270. For dairy cattle, what nutrient is the cheapest, most important are required in the largest quantity?

- (A) salt
- (B) water
- (C) calcium
- (D) phosphorus

271. How much concentrate can you feed a cow during the dry period?

- (A) 10 percent of body weight per day
- (B) 0.1 percent of body weight per day
- (C) 0.5 percent of body weight per day
- (D) 5 percent of body weight per day

272. While NDF (neutral detergent fiber) is mostly closely associated with forage intake, ADF (acid detergent fiber) is most closely associated with _____.

- (A) amount of stomach acid
- (B) rumen development
- (C) digestibility
- (D) size of plant cell wall

273. A calf's absorption of antibodies from colostrum takes place mostly in which stomach?

- (A) omasum
- (B) abomasum
- (C) reticulum
- (D) rumen

274. Ensiling essentially is a fermentation process in which sugars are converted to _____.

- (A) carbohydrates
- (B) fatty acids
- (C) microbial acids
- (D) ethyl yeasts

275. The quantity of moisture-free feed consumed by an animal in 24 hours is called _____.

- (A) acid detergent fiber
- (B) forage-to-concentrate ration
- (C) dry matter intake
- (D) crude protein

276. For every 2 pounds of expected milk production, cows should eat at least how much dry matter?

- (A) 1 pound
- (B) 3 pounds
- (C) 5 pounds
- (D) 10 pounds

277. What two situations cause fat to accumulate in the liver?

- (A) negative energy balance and stress
- (B) being in heat and foot rot
- (C) brain tumor and Johne's disease
- (D) low salt intake and mastitis

278. What is the difference between high-producing cows and average ones?

- (A) they eat more
- (B) they drink more
- (C) they ruminate longer
- (D) all of the above

279. In 1992, which state produced the most milk per cow?

- (A) Wisconsin
- (B) New Mexico
- (C) California
- (D) Pennsylvania

280. The legal standard for somatic cell count was lowered from 1,000,000 cells per milliliter to _____.

- (A) 100,000
- (B) 750,000
- (C) 500,000
- (D) 900,000

281. Which of these areas of a dairy farm are open to inspection by state and FDA personnel?

- (A) milk house
- (B) milking barn
- (C) adjacent storage areas
- (D) all of the above

282. When milking, what type of flow pattern do you want? (HINT: It's when the milk flows in the lower part of the milk line and airflow is in a clear, continuous path above the milk)

- (A) plug flow
- (B) slug flow
- (C) stratified flow
- (D) dispersed bubble flow

283. The dairy price support program works by allowing the Commodity Credit Corporation (CCC) to purchase surplus _____.

- (A) milkfat
- (B) bulk tanks
- (C) dairy products such as butter, nonfat dry milk and cheese
- (D) skim milk

284. The closer Reliability is to 100 on a bull's proof _____.

- (A) the less reliable the predicted transmitting abilities (PTA's)
- (B) the more reliable the PTA's
- (C) the more semen the bull will produce
- (D) all of the above

285. The cardinal sign of heat is when a cow _____.

- (A) bellows
- (B) stands when being mounted
- (C) has a discharge
- (D) walked the fence line

286. Milk production is about _____.

- (A) 68 percent heritable
- (B) 10 percent heritable
- (C) 25 percent heritable
- (D) is not heritable

287. What hormone is normally produced by the uterus 17 to 18 days after heat?

- (A) testosterone
- (B) corpus luteum
- (C) anestrus
- (D) prostaglandin

288. What device measures activity or motion of a cow by a miniaturized microprocessor memory chip embedded in the device mounted on an ankle band?

- (A) pedometers
- (B) prostaglandins
- (C) Kamar patches
- (D) ovulation monitors

289. True or False: Once thawed, semen can be refrozen successfully?

- (A) True
- (B) False

290. An average unit of semen, after it is thawed, contains _____.

- (A) 10 to 15 million live sperm cells
- (B) 1 to 5 billion live sperm cells
- (C) 20 to 25 live sperm cells
- (D) 20 to 25 million live sperm cells

291. How many milking daughters does USDA require a bull to have before he can establish a proof?

- (A) 100
- (B) 50
- (C) 25
- (D) 10

292. What is composed of an outer layer or thecal cells and is similar to a fluid-filled water blister that contains the egg?

- (A) corpus luteum
- (B) estrus
- (C) ovulation
- (D) follicle

293. When a straw of semen is immersed in liquid nitrogen, the temperature is _____.

- (A) 100 degrees F
- (B) -320 degrees F
- (C) -500 degrees F
- (D) -170 degrees F

294. Where is the best place for a cow to calve?

- (A) a dry, grassy pasture where there is seldom a high concentration of bacteria and other disease causing factors
- (B) the holding pen
- (C) a well-bedded, clean calving pen
- (D) a milking parlor

295. The January 1994 USDA sire summaries will include what new trait that combines production (MFP\$) with lactation, average somatic cell count, linear score, and productive life?

- (A) Net Merit
- (B) Overall Score
- (C) Standard Merit
- (D) PTA for score

296. What does the respiratory infection IBR stand for?

- (A) international bovine regulation
- (B) isn't breathing right?
- (C) intrafectious breathing regulator
- (D) infectious bovine rhinotracheitis

297. Milk fever is more prevalent in what breed?

- (A) Holstein
- (B) Jersey
- (C) Brown Swiss
- (D) Guernsey

298. Based on USDA's Farmer Cooperative Statistics, released in 1995, how many US dairy co-ops are there?

- (A) 50
- (B) 241
- (C) 1,001
- (D) 1,241

299. What is probably the most common disease found in dairy calves at weaning time?

- (A) Strep. ag. mastitis
- (B) cancer
- (C) coccidiosis
- (D) pasteurilla pneumonia

300. True or False: One cow can produced 5 gallons or more of moisture a day through respiration.

- (A) True
- (B) False

301. The more common name for *Musca domestica* is _____.

- (A) house fly
- (B) foot rot
- (C) cud
- (D) manure

302. The main key to effective fly control is _____.

- (A) cold weather
- (B) sanitation
- (C) docked tails
- (D) wasps

303. When using a body condition scoring system of 1 to 5, a score of 5 means the cow is very _____.

- (A) thin
- (B) average
- (C) fat
- (D) hungry

304. What is fatal degenerative disease affecting the central nervous system of cattle and is commonly known as "mad cow disease?"

- (A) bovine spongiform encephalopathy (BSE)
- (B) bovine somatotrophin (BST)
- (C) Johne's disease
- (D) psycho bovine disorder

305. One point of body condition score equates to about how many pounds of weight?

- (A) 50
- (B) 75
- (C) 100
- (D) 125

306. What is the name of the portion of a cow's back closest to the withers?

- (A) loin
- (B) chine
- (C) rump
- (D) thurl

307. A recent study determined that cows with less dairy form, short teats, tight fore udders and higher udders were associated with lower SCS scores. What does SCS stand for?

- (A) somatic count score
- (B) somatotrophin count score
- (C) somatic cell score
- (D) sell cow soon

308. Energy is the largest nutrient supply required by dairy cows. The energy value of a feed is measured by the heat produced when the feed is burned in a bomb calorimeter. What is the unit of measurement?

- (A) pound
- (B) calorie
- (C) ounce
- (D) inch

309. Protein is a combination of amino acids. The amino acids are unique among compounds involved in nutrition because they contain what element?

- (A) nitrogen
- (B) copper
- (C) calcium
- (D) helium

310. What is produced in adequate amount during 15 minutes of cud chewing for each pound of dry matter consumed that acts as the cow's natural buffer?

- (A) blood
- (B) saliva
- (C) sweat
- (D) bile

311. Hay forages fed to the milking herd should have Relative Feed Value ranging from _____.

- (A) 100-110
- (B) 120-130
- (C) 140-150
- (D) 180-190

312. Body condition scores from 1 to 5 are used to track herd health and nutrition. Dry cows should have a body score from _____.

- (A) 0.5 - 1.0
- (B) 2.0 - 2.5
- (C) 2.5 - 3.0
- (D) 3.5 - 4.0

313. Trace mineral deficiencies can affect your herd's fertility. An example of a supplemented trace mineral in dairy diets is _____.

- (A) selenium
- (B) calcium
- (C) phosphorous
- (D) water

314. What stomach catches hardware such as nails and wire?

- (A) rumen
- (B) reticulum
- (C) omasum
- (D) abomasum

315. What part of the digestive tract is responsible for reabsorbing water?

- (A) esophagus
- (B) rumen
- (C) small intestines
- (D) large intestines

316. The first feeding of colostrum should equal about _____ percent of the calf's body weight.

- (A) 1
- (B) 2
- (C) 5
- (D) 20

317. What percentage of the US beef supply is supplied by dairy farmers?

- (A) 1
- (B) 10
- (C) 25
- (D) 40

318. Which state had the greatest percentage increase in milk production in 1994 compared to 1993?

- (A) New Mexico
- (B) California
- (C) Wisconsin
- (D) Texas

319. The dairy industry has great impact on the US economy. Where does it rank as an agricultural industry, generating more than \$19.8 billion in farmer receipts?

- (A) first
- (B) second
- (C) fifth
- (D) twelfth

320. Since 1984, dairy farmers have been assessed _____ on every 100 pounds of milk sold to promote milk?

- (A) 1 cent
- (B) 15 cents
- (C) 25 cents
- (D) \$1.00

321. A profitable goal for days open in a dairy herd is 85 to 110 days. What factors determine days open?

- (A) days to first breeding
- (B) heat detection efficiency and accuracy
- (C) conception rate
- (D) all of the above

322. After insemination, how long do sperm live in the cow's reproductive tract?

- (A) 20 minutes
- (B) 6 hours
- (C) 24 hours
- (D) 2 days

323. True or False: Cows can produce 4 to 6 gallons of moisture per day by respiration alone.

- (A) true
- (B) false

324. Many hormones play an active role in a cow's estrus cycle. Which hormone is at its peak near the onset of standing estrus?

- (A) progesterone
- (B) estrogen
- (C) prostaglandin
- (D) BST

325. Young sires, as a group, are about equal in genetic merit to proven bulls that are around the _____ percentile in the Holstein breed.

- (A) 10
- (B) 40
- (C) 80
- (D) 95

326. When does the greatest mammary tissue growth occur during a cow's life?

- (A) when she is born
- (B) at puberty
- (C) during the first pregnancy
- (D) during the second pregnancy

327. Each animal has a mother and father and inherits certain genes from both parents. What percentage of genes does a calf receive from its sire?

- (A) 25%
- (B) 50%
- (C) 75%
- (D) 199%

328. Lactose intolerance occurs when humans do not produce enough of the enzyme _____.

- (A) lactase
- (B) pepsin
- (C) trypsin
- (D) lactaid

329. Silo gas levels are generally highest three weeks after silo filling. When silo gas is inhaled, it dissolves in the moisture of the lungs to form _____. This acid then burns the lungs, causing them to fill quickly with fluid.

- (A) nitric acid
- (B) lactic acid
- (C) bleach
- (D) carbonic acid

330. The rumen is one of four stomachs in the cow. It is a large fermentation vat with bacteria capable of digesting fiber. What position is the rumen?

- (A) first stomach
- (B) second stomach
- (C) third stomach
- (D) fourth stomach

331. Fat contains more energy than any other feed source. Relative to carbohydrates and proteins, how much more energy does fat have per gram?

- (A) 0
- (B) 0.25
- (C) 2.25
- (D) 25.25

332. With a balanced nutrition program and sound management practices, a 6 month old Holstein calf should weigh how many pounds and be how many inches tall?

- (A) 200 pounds and 30 inches
- (B) 400 pounds and 40 inches
- (C) 600 pounds and 46 inches
- (D) 1,000 pounds and 50 inches

333. Before a calf is weaned, it should be consuming how many pounds of started a day?

- (A) 0 to .5 pounds
- (B) 1.5 to 2 pounds
- (C) 5 to 5.5 pounds
- (D) 10 to 10.5 pounds

334. How much dry matter intake is needed for a 1,400 pound cow milking 90 pounds at 3.5 percent fat?

- (A) 5 to 7 pounds
- (B) 45 to 46 pounds
- (C) 51 to 53 pounds
- (D) 101 to 103 pounds

335. A pH of 7 is neutral. What is a pH less than 7?

- (A) acid conditions
- (B) hot conditions
- (C) basic conditions
- (D) cold conditions

336. If your herd's heat detection rate is 50% and your herd's conception rate is 50%, what is your pregnancy rate?

- (A) 0%
- (B) 25%
- (C) 50%
- (D) 100%

337. In the female reproductive tract, prostaglandins regress what?

- (A) uterus
- (B) ovary
- (C) corpus luteum
- (D) cervix

338. After 21 days postfertilization, there is a continual loss of embryos through embryonic death or disease. Some causes of embryonic loss include _____.

- (A) nutrition and chromosome abnormalities
- (B) metritis and abnormal hormone levels
- (C) leptospirosis, urea plasma, and BVD infections
- (D) all of the above

339. When talking about reproduction, an anovulatory cow is one with no _____.

- (A) uterus
- (B) tail
- (C) rumen
- (D) corpus luteum (CL)

340. ABS Global successfully cloned a Holstein bull named Gene. Since Gene is a male, his sex chromosome is XY; what will his clone's sex chromosome be?

- (A) XY
- (B) XX
- (C) YXX
- (D) none of the above

341. According to USDA statistical studies, how many calves died from birth to weaning last year?

- (A) 1%
- (B) 5%
- (C) 11%
- (D) 54%

342. When interpreting linear SCC scores, a change in one linear score results in a loss or gain of how many pounds of daily milk production?

- (A) 0
- (B) .5
- (C) 1.5
- (D) 10.5

343. While some extra-label drugs can be used by food-producing animals, others cannot. What is an illegal drug?

- (A) clenbuterol
- (B) penicillin
- (C) tetracycline
- (D) all of the above

344. There are two grades of milk in the US. What are they?

- (A) Grades A and AA
- (B) Grades A and Z
- (C) Grades AA and B
- (D) Grades A and B

345. In Chicago Mercantile Exchange trading on October 24, butter prices hit a record price for 1997. What was butter's price per pound?

- (A) 1 cent
- (B) 19 cents
- (C) \$1.00
- (D) \$1.95

346. Nearly 43% of all milk produced in the US is made into Class I products while 36% is made into Class III. What type of products make up Class III?

- (A) ice cream
- (B) yogurt
- (C) fluid milk
- (D) cheese

347. A recent Dairy Management Inc. study revealed children under 18 years of age make up 26% of the population but drink how much of the milk volume?

- (A) 46%
- (B) 36%
- (C) 16%
- (D) 6%

348. Dairy farmers can buy and sell dairy futures on what exchange?

- (A) Coffee, Sugar, and Cocoa Exchange
- (B) Chicago Mercantile Exchange
- (C) New York Stock Exchange
- (D) both A and B
- (E) all of the above

349. Although this state ranks last in US milk production, it did have the largest percentage increase in milk output from 1995 to 1996.

- (A) Alaska
- (B) Hawaii
- (C) Alabama
- (D) Wisconsin

350. In 1996, how many pounds of milk did it take to feed the average US consumer?

- (A) 12
- (B) 58
- (C) 128
- (D) 582

351. What can decrease mature equivalent (ME) milk production by 60 to 80 pounds per lactation?

- (A) inbreeding
- (B) mastitis
- (C) poor lighting
- (D) excessive fiber

352. In order to increase profitability, many producers figure their costs of production. If production costs are known, _____ is also known.

- (A) net margin
- (B) the following month's BFP
- (C) milking throughput
- (D) living expenses

353. A major reason many producers have started docking their cows' tails is:

- (A) fly control
- (B) ease in parallel parlors
- (C) ease during A.I.
- (D) PETA suggested it

354. Which is the best definition for rolling herd average?

- (A) an estimate of annual production
- (B) an average of the herd's fat and protein percentages
- (C) an average of the number of cows in milk at any given time
- (D) the average number of hours a cow in the herd spends traveling each year.

355. On the dairy, what is the best strategy when dealing with an electrical power outage?

- (A) milk once a day
- (B) have a generator ready
- (C) call the phone company
- (D) make sure there is plenty of kerosene in the farm lantern

356. When milking, if the work routine is 36 seconds per cow, then the cows milked per hour per operator (throughout) will be:

- (A) 36
- (B) 60
- (C) 100
- (D) this is an impossible routine

357. The most economically detrimental parasite of cattle is the:

- (A) horsefly
- (B) brown stomach worm
- (C) common tick
- (D) mosquito

358. How do bacterial pathogens that cause mastitis infections enter the udder?

- (A) through the teat canal
- (B) through udder sores in the udder cleft
- (C) through arteries leading to the udder
- (D) all of the above
- (E) none of the above

359. Which of the following could potentially lead to mastitis?

- (A) chapped teats
- (B) moisture in teats
- (C) toxins in feeds
- (D) all of the above
- (E) none of the above

360. Which of the following conditions could cause a cow to refuse to let down her milk?

- (A) unfamiliar noises
- (B) stressful conditions
- (C) a person milking who is tense
- (D) all of the above
- (E) cows have no control over their milk let-down

361. Experiments have shown that vitamin E and selenium:

- (A) influence the function of certain immune cells
- (B) can reduce calf death and illness
- (C) can improve reproductive and udder health in cow
- (D) all of the above
- (E) none of the above

362. More than _____ acres are lost every year due largely to development of subdivisions and by scatter development, as well.

- (A) ten
- (B) one thousand
- (C) one hundred thousand
- (D) one million

363. Which of the following legumes release the most nitrogen when cut and tilled-under?

- (A) alfalfa
- (B) birdsfoot trefoil
- (C) soybeans
- (D) peas

364. Although there is no guarantee to avoid problems with getting metal in feeds, there are some suggestions to help protect your cows. Which of the following is NOT one of them?

- (A) buy from only know, reputable suppliers
- (B) avoid having magnets on mixers and other feed-handling equipment
- (C) take random feed samples
- (D) all of the above are suggestions

365. In late 1997, the Food and Drug Administration (FDA) approved the use of _____ on beef and other red meats.

- (A) electric sterilization
- (B) irradiation
- (C) branding
- (D) E-Coli 0157:H7

366. A study at the University of Idaho recently found that _____ was largely responsible for the boom in dual births (twins).

- (A) antibiotics
- (B) reproductive hormones
- (C) high milk production
- (D) all of the above

367. The following have all been shown to produce a higher incidence of twinning rates in dairy cattle except for:

- (A) first-calf heifers
- (B) cows conceiving in summer
- (C) cows with lower milk yield
- (D) all of the above
- (E) none of the above

368. Which of the following is not a practice used to boost milk yield?

- (A) long-day photoperiod
- (B) fore-stripping
- (C) three-times-a-day milking (3X)
- (D) BST injections

369. What percent of world dairy products are traded in international markets?

- (A) 7%
- (B) 25%
- (C) 50%
- (D) 86%

370. In order to get the best conception rates, when is the best time to A.I.?

- (A) 24 hours before first standing heat
- (B) 4 to 12 hours before first standing heat
- (C) 4 to 12 hours after standing heat
- (D) 24 hours after first standing heat

371. A microwave oven can be useful in _____ colostrum.

- (A) thawing
- (B) pasteurizing
- (C) measuring
- (D) storing

372. While a cow's rear legs are attached to the body by a fairly rigid ball and socket joint, the front legs are connected by tendons and ligaments. This structure:

- (A) causes front legs to have less frequent lameness
- (B) causes front legs to have more frequent lameness
- (C) leads to more uneven weight distribution between the claws on the front legs
- (D) B and C
- (E) none of the above

373. All milk containers and packages have an ID code. The numbers of the code typically represent the _____.

- (A) state and plant in which the product was processed
- (B) expiration date of the product
- (C) volume of product contained in the package
- (D) breed of cattle that produced the product

374. The American Farm Bureau Federation's seventh annual survey of the number of producing dairy farms in the country found that the number of farms is:

- (A) getting smaller
- (B) staying constant
- (C) getting larger
- (D) out of control

375. What is the temperature at which semen should be thawed then artificially inseminating cows?

- (A) 32 degrees F
- (B) 75 degrees F
- (C) 95 degrees F
- (D) 132 degrees F

376. After semen has been thawed, how soon should the cow be inseminated?

- (A) as soon as possible
- (B) 20 minutes
- (C) 6 to 8 hours
- (D) 48 hours

377. When keeping waste records, it is a good idea to have an accurate record of _____ produced on your farm.

- (A) nitrogen
- (B) phosphorus
- (C) potassium
- (D) all of the above
- (E) none of the above

378. Which of the following is the most likely to produce the lowest quality colostrum?

- (A) a cow in her third lactation
- (B) a high producing cow
- (C) a low producing cow
- (D) a and c
- (E) quality would be the same

379. In silages, maximum exposure to air, low moisture levels, and long particle size:

- (A) ensure the highest quality silage
- (B) eliminate the need for additives
- (C) eliminate the need for packing in bunker silos
- (D) promote growth of bacteria, yeasts, and molds

380. A total ration calf starter is a complete mixture. What does this mean?

- (A) the ration will give the calf scours
- (B) no additional hay is needed
- (C) ration also is adequate for mature cows
- (D) additives are evenly distributed throughout the ration

381. A calf should be given a gallon of high-quality colostrum within the first _____ of live.

- (A) 10 minutes
- (B) 12 hours
- (C) 2 days
- (D) week

382. Forage contains _____ which is why there is a rise in butterfat when more forage is fed.

- (A) acetate
- (B) propionate
- (C) water
- (D) glucose

383. Which of the following combinations will lead a calf to have more developed rumen papilli, creating more surface with which to absorb protein, energy, and other nutrients?

- (A) milk only
- (B) milk and grain
- (C) milk and hay
- (D) beer and peanuts

384. Excessive phosphorus use on your farm can:

- (A) contaminate water sources through runoff
- (B) raise feed costs
- (C) increase the land needed per cow
- (D) all of the above
- (E) no negative impacts have been found from excessive phosphorus

385. Feeding drought-stressed forages may reduce the _____ carrying capacity of the cow's blood.

- (A) oxygen
- (B) nitrogen
- (C) phosphorus
- (D) helium

386. Which of the following is true concerning assisted calf delivery?

- (A) all calves are born without assistance
- (B) a half-hitch should be placed below the fetlock
- (C) use as much force possible to pull the calf
- (D) assist in delivery at first sign of labor

387. Concerning infections of the foot, which of the following specifically affects the claw?

- (A) foot rot
- (B) hairy heel warts
- (C) sole ulcer
- (D) interdigital dermatitis
- (E) all of the above

388. Which of the following is a sign of heat stress in cows?

- (A) open-mouthed breathing
- (B) excess salivation
- (C) reduced conception rates
- (D) all of the above

389. Cattle are most comfortable at what temperature range?

- (A) 30 to 35 degrees
- (B) 50 to 55 degrees
- (C) 75 to 80 degrees
- (D) 95 to 100 degrees

390. A source of elevated bacteria levels in a raw milk may be which of the following?

- (A) slow or incomplete milk cooling
- (B) unclean milk contact surfaces
- (C) sediment in milk
- (D) all of the above

391. The most common reason for milk contaminated with antibiotics is:

- (A) equipment problems
- (B) accidental human error
- (C) intentional human error
- (D) the "Great Milk-Hauler conspiracy"

392. The most important part of teat disinfection is:

- (A) drying teats thoroughly
- (B) completely covering teats with predip
- (C) using enough dirty water to clean each teat
- (D) maintaining a 5-second predip contact time

393. Which of the following affects particle size of forages?

- (A) the crop species
- (B) PTO (power take off)
- (C) fiber level
- (D) all of the above
- (E) none of the above

394. When reading bull proofs, Reliabilities (Rel.) indicate:

- (A) the accuracy of genetic evaluations
- (B) conception rate
- (C) the chance of getting a cow pregnant
- (D) the change of producing a heifer calf

395. Which of the following is NOT a sign that a cow is in heat?

- (A) she stands when mounted
- (B) she mounts other cows
- (C) she eats more
- (D) she shows more vocal behavior

396. By the year 2007, the Internal Revenue Service plans to have 80% of all tax returns:

- (A) paid in full
- (B) under \$100
- (C) completed truthfully
- (D) filed electronically

397. Australia and New Zealand have a combined share equal to 43% of the world dairy trading market, and they produce _____ of the world's milk.

- (A) 4%
- (B) 15%
- (C) 43%
- (D) 98%

398. Proper summer ventilation in a parlor will do which of the following?

- (A) provide comfort to milkers and cows
- (B) force heat from the area
- (C) force moisture from the area
- (D) all of the above

399. According to Dairy Records Management Systems (DRMS), what is the number one reason Holsteins are culled?

- (A) reproductive failure
- (B) death
- (C) low production
- (D) disease or injury

400. Which of the following countries yields the highest production per cow?

- (A) Australia
- (B) Canada
- (C) Japan
- (D) United States

***** ANSWER KEY *****

1. C
2. A
3. B
4. C
5. C
6. B
7. E
8. A
9. C
10. A
11. B
12. C
13. B
14. B
15. D
16. D
17. C
18. B
19. C
20. A
21. A
22. B
23. B
24. C
25. B
26. C
27. D
28. D
29. A
30. A
31. D
32. D
33. A
34. A
35. B
36. A
37. A
38. A
39. A
40. B
41. E
42. D
43. A
44. E
45. A
46. A
47. A
48. D
49. C
50. B
51. D
52. A
53. B
54. A

55. B
56. E
57. D
58. B
59. A
60. D
61. A
62. D
63. B
64. A
65. C
66. D
67. A
68. A
69. D
70. B
71. A
72. E
73. A
74. C
75. C
76. B
77. E
78. D
79. A
80. C
81. D
82. B
83. D
84. C
85. A
86. A
87. E
88. D
89. A
90. A
91. C
92. A
93. C
94. A
95. B
96. A
97. E
98. C
99. A
100. C
101. A
102. D
103. B
104. A
105. A
106. A
107. A
108. E
109. C
110. B
111. A
112. C

113. D
114. B
115. A
116. B
117. C
118. E
119. C
120. E
121. C
122. A
123. E
124. B
125. A
126. C
127. B
128. C
129. C
130. A
131. B
132. D
133. B
134. C
135. C
136. B
137. B
138. C
139. B
140. B
141. A
142. B
143. C
144. C
145. C
146. A
147. A
148. D
149. D
150. A
151. C
152. B
153. B
154. B
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