1. Subcutaneous injections are given:
   a. in the muscle  
   b. orally       
   c. in the ear    
   d. under the skin

2. The breed of cattle that was developed on the King Ranch in Texas and consists of 3/8 Brahman and 5/8 Shorthorn is called:
   a. Limousin  
   b. Shorthorn 
   c. Santa Gertrudis 
   d. Brangus

3. A breed of cattle that originated in Scotland, that has a smooth hair coat, black in color, polled, and is one of the most popular breeds in the United States today:
   a. Red Angus  
   b. Angus     
   c. Polled Hereford 
   d. Devon

4. Smallest part of a ruminant’s stomach
   a. rumen  
   b. omasum  
   c. reticulum  
   d. abomasum

5. Swine are in a class of animals which consume both plants and meat, known as:
   a. Omnivores  
   b. Herbivores 
   c. Ruminants  
   d. Carnivores

6. The critical stage of production in livestock when giving birth to their livestock is:
   a. gestation  
   b. parturition 
   c. pregnancy  
   d. palpation

7. The expected yield of a hog with a USDA quality grade of No. 1 is:
   a. 52 to 54.4%  
   b. 54.4 to 57.3% 
   c. 57.4 to 60.3% 
   d. 60.4% or greater

8. The most important whole-sale cut of lamb is:
   a. shoulder  
   b. foreshank 
   c. leg       
   d. rib

9. The secretion and production of milk in sheep, cattle, and swine is known as:
   a. lactation  
   b. ovulation 
   c. anestrous  
   d. fertilization

10. The breed of swine which is white in color with erect ears and used extensively in commercial operations for the maternal characteristics is the:
    a. Landrace  
    b. Chester White 
    c. Yorkshire  
    d. Berkshire

11. The first milk production after giving birth is known as:
    a. lactose  
    b. colostrum 
    c. buttermilk 
    d. skim milk
12. The age of the beef animal and the amount of marbling in the carcass affect the ________ of the carcass:
   a. yield grade   b. dressing percentage
   c. hot carcass weight   d. quality grade

13. The breeds of cattle with origin in Europe such as Charolais, Simmental, Limousin are usually referred to as:
   a. Maternal breeds   b. British breeds
   c. Commercial breeds   d. Continental breeds

14. A disorder characterized by gas distention in the rumen, seen on the animal’s left side is commonly referred to as:
   a. brucellosis   b. woody tongue
   c. bloat   d. ketosis

15. A cattle producer that produces breeding stock including bulls and females for cow-calf operations in commonly called a:
   a. feedyard manager   b. commercial cattle man
   c. seedstock/purebred breeder   d. stocker operator

16. The record of the ancestors of a particular animal is recorded in its:
   a. performance record   b. pedigree
   c. phenotype   d. genetic map

17. The amount of fat cover on a market lamb is referred to as:
   a. carcass merit   b. fleshing
   c. quality   d. finish

18. Feed that is provided to young lambs as an extra ration and is fed in an area that mature ewes cannot access is called a:
   a. lactation ration   b. finishing ration
   c. creep feed   d. maintenance feed

19. The most prevalent fine-wool breed of sheep in the United States is the:
   a. Rambouillet   b. Leiceter
   c. Columbia   d. Hampshire

20. The most important factor in formulating a ration of livestock is:
   a. feed cost   b. size of the animal
   c. total digestive nutrients   d. availability of food

21. The gestation time for sheep is:
   a. 114 Days   b. 148 Days
   c. 283 Days   d. 336 Days
22. Administrating an medicinal agent to livestock that requires placement directly into the bloodstream is a(n) ________ injection:
   a. subcutaneous     b. intramuscular
   c. intravenous     d. intrarumen

23. An objectionable inherited defect in swine known as a whorl is actually a(n):
   a. hair disturbance     b. extra dewclaw
   c. inverted teat     d. defective color

24. Heifers most commonly reach puberty at the age of:
   a. 3-4 Months     b. 6-8 Months
   c. 10-14 Months     d. 24 Months

25. Estrus in cattle usually occurs every:
   a. 12 Days     b. 21 Days
   c. 30 Days     d. 60 Days

26. EPD stands for:
   a. Expected Product Differential     b. Express Package Delivery
   c. Extra Production Difference     d. Expected Progeny Difference

27. A market where cattle are sold by public bidding with the animals going to the highest bidder is known as a(n):
   a. contract market     b. electronic market
   c. auction market     d. internet market

28. In swine, a male that has been castrated before reaching sexual maturity is called:
   a. wether     b. stag
   c. boar     d. barrow

29. The presence and distribution of fat in a cut of meat is described as:
   a. marbling     b. yield
   c. condition     d. finish

30. Cattle that are generally between six months and one year old are sold to people who fatten them for market are commonly referred to as:
   a. veal cattle     b. feeder cattle
   c. slaughter cattle     d. packer cattle

31. Cattle can generally lose from one to five percent of their weight when transported. The loss of weight that occurs when cattle are moved to market is referred to as:
   a. fillback     b. sale weight
   c. shipping weight     d. shrinkage
32. The class of sheep that are evaluated more on the quality of their fleece than other sheep are known as:
   a. long wool breeds    b. medium wool breeds
   c. mutton breeds      d. fine wool breeds

33. One common characteristic between Hampshire, Yorkshire, and Berkshire swine is:
   a. color                   b. maternal qualities
   c. erect ears              d. terminal qualities

34. A swine disease causing degeneration of the turbinate bones in the snout and the twisting of the snout is:
   a. erysipelas               b. pseudorabies
   c. parvovirus               d. rhinitis

35. A system that is used for trading contracts for future delivery of cattle is known as:
   a. auction market           b. futures market
   c. order buying             d. internet auction

36. In 1985, a one dollar per head check off for every head of beef sold in the United States was established as a result of the passage of the:
   a. packers and stockyard act b. beef quality assurance act
   c. beef promotion and research act d. livestock marketing tax

37. The process of placing sperm in the female reproductive tract by some other means than natural mating is known as:
   a. embryo transfer          b. estrous synchronization
   c. pregnancy testing        d. artificial insemination

38. The process of preparing calves for the stress of being moved into the feed lot is called:
   a. preconditioning          b. finishing
   c. stockering               d. stretching

39. Cattle generate more dollars than any other agricultural enterprise. Cattle account for approximately _____ percent of all commodity receipts in the United States.
   a. 22  b. 38  c. 50  d. 65

40. A cow that swallows a nail, the object could be held in the
   a. rumen          b. reticulum
   c. omasum        d. abomasum
41. The removal of all or part of the tail from sheep is referred to as:
   a. castration  
   b. notching  
   c. dehorning  
   d. docking

42. The biggest problem of raising sheep is the loss caused by:
   a. external parasites  
   b. blue tongue  
   c. overeating disease  
   d. internal parasites

43. Organic acids which are the building blocks in the formation of proteins are:
   a. amino acids  
   b. glycogens  
   c. chromosomes  
   d. fat soluble vitamins

44. The most common parasites among beef cattle are:
   a. flies  
   b. round worms  
   c. liver flukes  
   d. ticks

45. Breeds of cattle that are used for both milk and meat production are considered to be:
   a. maternal breeds  
   b. terminal breeds  
   c. dual purpose breeds  
   d. continental breeds

46. Beef cattle or sheep born without horns are commonly referred to as:
   a. hornless  
   b. polled  
   c. scurred  
   d. bald

47. A method of animal identification that is puncture in the skin of numbers or letters is known as:
   a. freeze brand  
   b. hot brand  
   c. ear tag  
   d. tattoo

48. A selective form of breeding in which the sire and dam are related which some refer to as a mild from of inbreeding is called:
   a. outcrossing  
   b. crossbreeding  
   c. terminal  
   d. linebreeding

49. The degree to which the crossbred offspring outperforms its parent purebreds is known as:
   a. hybrid vigor  
   b. high performance  
   c. ratio condition  
   d. phenotype

50. A beef animal that has extremely straight hind legs is best described as being:
   a. cow-hocked  
   b. sickle-hocked  
   c. structurally sound  
   d. post-legged
51. Refers to the lack of roughness in finish or bone structure in beef cattle:
   a. Condition  
   b. Smoothness  
   c. Breed Character  
   d. Type  

52. Which of the following swine health problems is caused by a nutritional deficiency?
   a. anemia  
   b. pseudorabies  
   c. influenza  
   d. erysipelas  

53. What is the basic energy feed used in hog rations?
   a. soybean meal  
   b. alfalfa meal  
   c. oats  
   d. corn  

54. The gestation time for swine is:
   a. 148 days  
   b. 333 days  
   c. 114 days  
   d. 104 days  

55. When evaluating swine performance data, litter weights are adjusted to a standard of how many days?
   a. 15 days  
   b. 21 days  
   c. 28 days  
   d. 12 days  

56. The most common swine identification system is:
   a. ear tags  
   b. ear notching  
   c. tattooing  
   d. freeze branding  

57. The mating of animals of different family lines within the same breed is:
   a. out crossing  
   b. inbreeding  
   c. line breeding  
   d. crossbreeding  

58. Which major swine breed originated in England, with the major development of the breed occurring in Kentucky? Originally known as the thin rind.
   a. duroc  
   b. chester white  
   c. Hampshire  
   d. Poland China  

59. Abortion early in the gestation period is a common symptom of:
   a. edema  
   b. erysipelas  
   c. brucellosis  
   d. SMEDI  

60. One common characteristic between Yorkshire, Landrace, and Chester Whites is:
   a. maternal qualities  
   b. terminal qualities  
   c. ear shaped  
   d. color  

61. Which state produces the most hogs?
   a. Texas  
   b. Iowa  
   c. Illinois  
   d. Oklahoma
62. The jowl on a swine is located in the:
   a. Ham area       b. Loin area
   c. Flank area     d. Throat area

63. Feed additives in Swine rations that control internal parasites are:
   a. anthelminites       b. antibiotics
   c. vitamins            d. amino acids

64. The testes produce sperm cells and the male sex hormone:
   a. progesterone       b. estrogen
   c. testosterone       d. infundibulum

65. The age at which an animal reaches sexual maturity is:
   a. puberty           b. adolescence
   c. heterosis         d. parturition

66. The process of taking food nutrients through the intestinal wall is:
   a. mastication       b. absorption
   c. assimilation      d. regurgitation

67. The reflex and response that an animal has at birth is:
   a. conditioning      b. intelligence
   c. instinct          d. reasoning

68. The normal body temperature of sheep and swine is:
   a. 98.6 ºF           b. 100 ºF
   c. below 97 ºF       d. above 102 ºF

69. Sheep and Cattle both have multiple stomachs referred to as a(n):
   a. ruminant          b. intestine
   c. colon             d. omasum

70. The amount of fat cover on a market steer is referred to as:
    a. finish            b. fleshing
    c. marbling          d. carcass merit

71. When animals band together in a herd of flock, the behavior is known as:
   a. investigate       b. agonistic
   c. allelomimetic     d. gregarious

72. Which state produces the most beef cattle?
   a. Kentucky          b. Texas
   c. Nebraska          d. California
73. Which of the following wholesale cuts of beef has the highest value?
   a. brisket    b. chuck
   c. shank      d. rib

74. The weight of a chilled beef carcass compared to the live weight of the animal is referred to as:
   a. Carcass merit    b. yield
   c. quality         d. balance

75. Which breed of beef cattle imported from France was originally used as draft animals?
   a. Hereford    b. Chianina
   c. Brangus     d. Maine-Anjou

76. What area of livestock production is the major issue of animal rights organizations?
   a. nutrition    b. health
   c. confinement  d. reproduction

77. Calves younger than 3 months of age sold for slaughter are:
   a. veal    b. baby beef
   c. kids    d. cabritos

78. The first breed of beef cattle imported to the United States in the late 1700’s was the:
   a. Hereford    b. Angus
   c. Shorthorn   d. Brahman

79. The first of the Continental breeds to be imported in the United States:
   a. Charolais    b. Simmental
   c. Limousin     d. Salers

80. The average feed conversation ratio for beef cattle on full feed is:
   a. 6:1-7:1    b. 3:1-4:1
   c. 10:1-12:1  d. 2:1-3:1

81. Sheep rations typically consist of 80 to 90 percent:
   a. corn    b. roughage
   c. concentrate    d. sorghum

82. The recommended protein percent of a grower ration for swine from weaning to 75 pounds is:
   a. 22%    b. 19%
   c. 16%    d. 12%
83. The first milk produced by a ewe after giving birth is known as:
   a. buttermilk      b. lactose
   c. colostrum      d. lecithin

84. The only sheep native to North America
   a. bighorn     b. fine-wool
   c. medium-wool    d. fur-sheep

85. Wheat bran and animal fat are feed concentrates that are classified as:
   a. grains    b. plant proteins
   c. processing by-products    d. animal proteins

86. Which protein concentrate is limited to use by ruminants?
   a. molasses     b. soybean meal
   c. meat scraps    d. urea

87. The physical appearance of an animal is known as:
   a. genotype      b. pedigree
   c. performance     d. phenotype

88. Most of the problem with food-born illnesses are a result of
   a. parasitic     b. chemical
   c. viral     d. bacterial

89. Administering a medical agent to livestock that requires placement into the skin is
   a(n)____________ injection.
   a. intradermal      b. intravenous
   c. intramuscular     d. intramamary

90. Disease caused by an organism that mainly affects the lungs:
   a. brucellosis      b. erysipelas
   c. tuberculosis     d. leptospirosis

91. Diseases caused by a virus or bacteria are classed as:
   a. nutritional      b. physiological
   c. morphological     d. pathogenic

92. A nutritional problem characterized by a swollen abdomen on the left side, labored breathing, profuse salivation, groaning, lack of appetite, and stiffness.
   a. bloat      b. founder
   c. colic      d. anemia

93. Helminths are of major economic importance to the livestock industry in regard to the management of:
   a. external parasites      b. internal parasites
   c. viruses     d. disease
94. The most popular breed of medium wool breed of sheep in the United States is the:
   a. Suffolk  
   b. Southdown  
   c. Shropshire  
   d. Hampshire

95. More than ½ of all the crossbred sheep in the U.S. carry some percentage of the particular breed.
   a. Dorset  
   b. Rambouillet  
   c. Columbia  
   d. Merrino

96. The record of the ancestors of a particular animal is recorded in its:
   a. performance record  
   b. pedigree  
   c. phenotype  
   d. genetic map

97. Breeds of cattle that are used for both milk and meat production are considered to be:
   a. maternal breeds  
   b. terminal breeds  
   c. dual-purpose breeds  
   d. continental breeds

98. Animals that through selection and breeding have come to resemble one another and pass those traits uniformly to their offspring are defined as:
   a. a breed  
   b. progeny  
   c. a hybrid  
   d. genetics

99. What is an animal resulting from the mating of two different breeds?
   a. purebred  
   b. crossbred  
   c. inbred  
   d. feral

100. Which common breed of swine was imported to the U.S. from Denmark?
    a. Landrace  
    b. Chester White  
    c. Hampshire  
    d. Yorkshire

101. The majority of composite breeds of cattle in the U.S. use what breed as a foundation?
     a. Charolais  
     b. Simmental  
     c. Angus  
     d. Braham

102. Modern domestic cattle evolved from what single early ancestor?
     a. Aurochs  
     b. Bos Taurus  
     c. Bos indicus  
     d. Braham

103. Foot rot is a _______ disease.
     a. bacterial  
     b. nutritional  
     c. viral  
     d. fungal
104. Known as the “blind gut”-
    a. rumen     b. secum
    c. lipase     d. small intestine

105. Feedstuffs such as hay and silage are classified as:
    a. proteins     b. concentrates
    c. roughages     d. vegetative

106. Amino acids are the building blocks of:
    a. fats     b. sugars
    c. starches     d. protein

107. The ability to initiate, sustain, and support reproduction.
    a. breeding     b. parturition
    c. gestation     d. fertility

108. How well an animal likes or accepts a feed is referred to as the:
    a. digestibility     b. palatability
    c. balance     d. composition

109. What is the most important nutrient in a swine ration?
    a. soybean     b. water
    c. corn     d. milk

110. The total protein contained in a feed is _______ protein.
    a. crude     b. non-digestible
    c. digestible     d. plant

111. Which of the following elements is not a component of a carbohydrate?
    a. Carbon     b. Nitrogen
    c. Hydrogen     d. Oxygen

112. Which of the following feeds is highest in total digestible nutrients (TDN)?
    a. soybean meal     b. sudangrass
    c. silage     d. coastal Bermuda

113. Feed additives used to prevent disease and promote growth are:
    a. antibiotics     b. anthelmintics
    c. hormones     d. antioxidants

114. Carbohydrates make up approximately ________ percent of a ration:
    a. 50%     b. 90%
    c. 25%     d. 75%

115. The removal of the testicles from a male animal is:
    a. vaccination     b. dehorning
    c. insemination     d. castration
116. The degree to which crossbreed offspring out performs its purebred parents is:
   a. hybrid vigor  b. ration condition
   c. high performance  d. phenotype

117. The average gestation time for cattle is:
   a. 383 Days  b. 283 Days
   c. 248 Days  d. 350 Days

118. Which of the following traits is considered undesirable when judging market lambs:
   a. harder handling  b. early maturing
   c. heavier muscled  d. longer hind-saddle

119. The gestation time for swine is:
   a. 141 Days  b. 121 Days
   c. 114 Days  d. 104 Days

120. When evaluating swine performance data litter weights are adjusted to a standard of how many days:
   a. 14 Days  b. 21 Days
   c. 28 Days  d. 12 Days

121. External fat on a lamb carcass is measured between which two ribs:
   a. 11 & 12  b. 9 & 10
   c. 13 & 14  d. 12 & 13

122. The tube that carries air to an animal’s lungs:
   a. trachea  b. turbinate
   c. esophagus  d. epidermal

123. A 130 pound wether will have a carcass weight of
   a. 65  b. 80
   c. 95  d. 100

124. The leg and the loin of a lamb are the primary wholesale meat cuts that come from the:
   a. rib  b. fore-saddle
   c. hind-saddle  d. rack

125. Traces of marbling within the carcass would best indicate what quality grade?
   a. standard  b. cutter
   c. prime  d. choice
126. Morphological defects in livestock are caused by:
   a. genetics     b. pathogens
   c. mutations     d. accidents

127. Enterotoxemia is a ________ disease:
   a. bacterial     b. viral
   c. nutritional     d. fungal

128. This breed originated in Southern England and was used in the formation of most medium wool breeds:
   a. Suffolk     b. Southdown
   c. Cotswold     d. Merino

129. The most common form of identification used in the swine industry is:
   a. tattooing     b. ear notching
   c. ear tagging     d. freeze branding

130. What is the basic protein source used in most livestock rations:
   a. soybean meal     b. corn
   c. fishmeal     d. chromium

131. The average dressing percentage of swine:
   a. 80%     b. 70%
   c. 60%     d. 45%

132. Feed additives in swine rations that control internal parasites are:
   a. antibiotics     b. amino acids
   c. anthelminitics     d. vitamins

133. This breed of swine has an exceptionally high lean-to-fat ratio:
   a. Chester White     b. Pietrain
   c. Duroc     d. Hampshire

134. The primary use of nutrients in a ration for livestock is for:
   a. reproduction     b. growth
   c. maintenance     d. fat

135. A major change in the swine industry has been the rapid growth of:
   a. farrow-to-finish     b. vertical integration
   c. grade and yield     d. feeder pig production

136. Most of the breeds of hogs raised in the United States were developed in:
   a. United States     b. England
   c. Denmark     d. Ireland
137. The practice of feeding a ration for 10 days to 2 weeks before breeding and 2 weeks after breeding that causes a ewe to gain rapidly is known as:
   a. lactating    b. gestation feeding
   c. flushing     d. breeding

138. Which of the following breeds of swine has the best performance of litter size?
   a. Duroc        b. Berkshire
   c. Yorkshire    d. Hampshire

139. Breeding gilts should have _______ good teats on each side
   a. Eight       b. Seven
   c. Five        d. Six

140. The natural waviness of a sheep’s wool:
   a. wave        b. staple
   c. crimp       d. body

141. The most important consideration for breeding yearling heifers:
   a. age         b. breed
   c. size        d. appearance

142. Which type of breeding system can produce hardier, vigorous lambs with more rapid gains?
   a. cross breeding  b. purebred breeding
   c. seed-stock breeding  d. inbreeding

143. The first breed of cattle developed in the United States:
   a. Polled Hereford  b. Santa Gertrudis
   c. Texas Longhorn    d. Shorthorn

144. What is the fourth primal cut of the swine carcass? The first three are ham, loin, and picnic shoulder.
   a. belly        b. fore-rib
   c. Boston Butt  d. fore-flank

145. Which class of sheep is noted for producing a fleece, medium fineness and length?
   a. medium wool breeds  b. fine wool breeds
   c. long wool breeds    d. carpet wool breeds

146. A magnesium deficiency in lactating beef cattle can cause:
   a. bloat      b. milk fever
   c. paratuberculosis  d. grass tetany
147. Abundant marbling within a carcass should indicate a quality grade of:
   a. standard     b. select
   c. prime        d. cutter

148. The average length of estrus in the sow is:
   a. three days     b. 16 to 18 hours
   c. 21 days        d. 30 hours

149. The following specific term refers to shearing around the udder, between the legs, and around the dock of sheep:
   a. shearing       b. clipping
   c. blocking       d. tagging

150. Ideally, desirable market lambs weigh between:
   a. 70 to 90 pounds b. 120 to 135 pounds
   c. 90 to 110 pounds d. 140 to 160 pounds

151. Generally in market animals the leaner the animal is, the:
   a. lower the numerical yield grade b. higher the numerical yield grade
   c. higher the quality grade        d. yield and quality are equal

152. This breed of swine originated from the eastern United States and is known for its growth rate and feed conversion efficiency.
   a. Hampshire     b. Duroc
   c. Chester white d. Yorkshire

153. Breed of cattle originating from Switzerland and known for being docile having rapid growth and thick muscling.
   a. Simmental     b. Hereford
   c. Shorthorn     d. Brahman

154. The normal body temperature of cattle is:
   a. 101.5 degrees F    b. 98.5 degrees F
   c. above 102 degrees F d. 103.5 degrees F

155. This disease is a chronic infection of cattle that causes a thickening of the wall of the intestine:
   a. Johne’s disease     b. Lumpy jaw
   c. Foot and mouth disease d. BVD

156. The highest quality grade for steers and heifers.
   a. choice           b. select
   c. prime            d. commercial
157. Refers to the refinement of the head, hide, bone, and hair:
   a. quality          b. balance
   c. femininity       d. yield

158. This is the largest compartment of a ruminant stomach:
   a. omasum          b. abomasum
   c. rumen           d. reticulum

159. Which of the following is called the true stomach of a ruminant?
   a. Rumen          b. abomasum
   c. reticulum      d. omasum

160. Most food nutrients used by the animal are absorbed from the:
   a. small intestine b. duodenum
   c. stomach        d. cecum

161. What organ in the animal’s body produces bile?
   a. gall bladder   b. pancreas
   c. cecum         d. liver

162. High value cuts of beef include all EXCEPT:
   a. rib          b. loin
   c. flank        d. round

163. What are the main animal nutrients found in animal ration?
   a. fats          b. proteins
   c. vitamins      d. carbohydrates

164. What component of a feed ration contains no carbon and is classified as inorganic?
   a. vitamins      b. oils
   c. protein       d. minerals

165. Wool prices are usually highest in:
   a. Winter        b. Late Spring
   c. Early Fall    d. Late Fall

166. Cutting off part of a pigs tail is called:
   a. Fletching     b. Flushing
   c. Docking       d. Tagging

167. Sheep breed that originated in New Zealand in the early 1900s:
   a. Corriedale    b. Panama
   c. Southdale     d. Columbia
168. What is the first step in balancing a ration for cattle, sheep, or swine?
   a. choose the feeds to be used in the ration
   b. consult a table of nutrient requirements
   c. identify the age, weight, and function of the animal being fed
   d. calculate the amounts of each feed to use in the ration

169. What breed of beef cattle is the leader in total number registered since 1970 in the U.S.?
   a. Charolais  
   b. Limousin  
   c. Hereford 
   d. Angus 

170. Which of the following breeds has the highest standard birth weights used in performance testing programs?
   a. Hereford 
   b. Angus 
   c. Shorthorn 
   d. Charolais 

171. When judging a market class of beef cattle, the term referring to the natural fleshing of the animal is:
   a. type  
   b. muscling  
   c. finish 
   d. balance 

172. Feeding programs for beef cow-calf herds are based on the use of:
   a. roughages  
   b. concentrates  
   c. grains 
   d. protein 

173. Yearlings are feeder calves between one and two years old, usually weighing about:
   a. 100-250 pounds  
   b. 240-400 pounds  
   c. 400-550 pounds 
   d. 550-700 pounds 

174. What type of identification is commonly used especially with large herds and required by law in most western states?
   a. tattooing  
   b. neck chains  
   c. branding 
   d. ear tags 

175. At one time _________ was one of the most serious of all hog diseases. Now it is said to be eradicated:
   a. Cholera  
   b. Pneumonia 
   c. Edema 
   d. Swine Flu 

176. Which of these states produce the most swine?
   a. Georgia  
   b. Kentucky  
   c. North Carolina 
   d. South Carolina
177. What disease is carried by insects and affects the eyes of cattle?
   a. Leptospirosis    b. Actinomycosis
   c. Pinkeye            d. Listeriosis

178. Which pure breed of swine developed in the early 1700’s was the first to be imported to the United States?
   a. Berkshire    b. Landrace
   c. Tamworth       d. Pietrain

179. Which breed of swine developed in the United States originated in the state of Ohio?
   a. Hereford    b. Duroc
   c. Chester White   d. Poland China

180. The four primal cuts of the hog carcass make up what percent of the live weight (250 pounds) of a hog?
   a. 25%    b. 32%
   c. 44%       d. 58%

181. Which is one of the four major minerals frequently added to hog rations?
   a. Iron    b. Copper
   c. Selenium       d. Calcium

182. Increasing the amount of feed fed to sows or gilts prior to breeding is called:
   a. lactating    b. inseminating
   c. framing       d. flushing

183. The time during which an animal is pregnant is:
   a. parturition    b. fertilization
   c. gestation       d. ovulation

184. The average time of gestation for swine is:
   a. 96 days    b. 114 days
   c. 144 days       d. 220 days

185. What is the period of time when a female will accept the male for breeding?
   a. gestation    b. estrus
   c. conception       d. ovulation

186. Anemia is a condition affecting mainly baby pigs due to a diet deficient in:
   a. iron    b. protein
   c. calcium       d. amino acids
187. The sudden death of heavily muscled hogs is referred to as:
   a. Streptococcus Suis          b. Eperythrozoonosis
   c. Necrotic Enteritis          d. Porcine Stress Syndrome

188. The leading state for sheep production is:
   a. Wyoming                   b. Texas
   c. Montana                   d. Illinois

189. The American Merino breed of sheep is classified as a:
   a. fine wool breed           b. fur sheep breed
   c. long wool breed           d. carpet wool breed

190. Which breed of sheep was developed in France?
   a. Debouillet                 b. Southdown
   c. Rambouillet                d. Delaine Merino

191. Back-fat on lambs should measure 0.15 to 0.20 inches at the:
   a. first rib                 b. fifth rib
   c. eighth rib                d. twelfth rib

192. The normal average temperature for healthy sheep is:
   a. 98.6 degrees F             b. 100.2 degrees F
   c. 102.3 degrees F           d. 104.8 degrees F

193. The visible sign of estrus in ewes is primarily:
   a. swelling of the vulva
   b. trying to mount other ewes
   c. frequent urination
   d. None, sheep do not show any visible signs

194. Which of the following quality grades is used for lambs and yearlings, but not for
     slaughter sheep?
   a. Prime                     b. Choice
   c. Good                      d. Utility

195. Cattle were first brought to the United State by:
   a. Christopher Columbus in 1493 b. Ponce De Leon in 1513
   c. Francisco Coronado in 1525   d. Jacques Cartier in 1534

196. Swine were first domesticated around 4900 B.C. by the:
   a. English                   b. Arabians
   c. Germans                   d. Chinese
197. Which is **NOT** correct about livestock classified as mammals?
   a. Warm blooded
   b. Diaphragm between chest & abdominal cavities
   c. Three chambered heart
   d. Mammary glands

198. Number of animals that can be grazed in a pasture is referred to:
   a. herd
   b. carrying capacity
   c. feedlot number
   d. field amount

199. Which of the states listed has the highest total of cash receipts from livestock?
   a. California
   b. Wisconsin
   c. Colorado
   d. Alabama

200. Breed of swine developed in Pennsylvania:
   a. Duroc
   b. Hampshire
   c. Yorkshire
   d. Chester White

201. Vertebrae bones are classified as:
   a. long
   b. irregular
   c. flat
   d. short

202. The bones in the front legs of an animal make up the:
   a. Axial Skeleton
   b. Pectoral Limbs
   c. Vertebral column
   d. Pelvic limbs

203. Air is down into the respiratory system through the:
   a. trachea
   b. pharynx
   c. bronchioles
   d. nostrils

204. The kidneys and bladder are major components of the:
   a. urinary system
   b. lymphatic system
   c. nervous system
   d. endocrine system

205. The digestive system in swine begins with the:
   a. stomach
   b. esophagus
   c. small intestine
   d. mouth

206. In cattle and sheep the rumen and reticulum make up what percent of the stomach?
   a. 85
   b. 66
   c. 50
   d. 25

207. Which division of the ruminant stomach is the true stomach?
   a. rumen
   b. reticulum
   c. omasum
   d. abomasum
208. The key to absorption is the small finger like projections on the walls of the small intestine called:
   a. hairs                  b. cecum
   c. duodenum               d. villi

209. Feed nutrients made of sugars and starches are:
   a. complex carbohydrates  b. simple carbohydrates
   c. amino acids            d. vitamins

210. Which amino acid is classified as essential for swine?
   a. lysine                  b. alanine
   c. tyrosine                d. proline

211. Which feed nutrients have the highest energy value?
   a. carbohydrates          b. fats
   c. proteins               d. minerals

212. Which vitamin will dissolve in water:
   a. Vitamin A              b. Vitamin C
   c. Vitamin E              d. Vitamin K

213. A deficiency of what mineral in baby pig rations will cause anemia:
   a. Iodine                  b. Calcium
   c. Iron                    d. Zinc

214. Which of the following minerals is classified as a trace mineral:
   a. Potassium               b. Calcium
   c. Salt                    d. Phosphorus

215. Which feed nutrient is the most important on a daily basis for livestock:
   a. Proteins                b. Energy Nutrients
   c. Water                   d. Vitamins

216. When trying to control worm infestation in livestock, which feed additive would be incorporated into the ration:
   a. Anthelmintics          b. Antimicrobials
   c. Antibiotics            d. Hormones

217. The length of time an implant is effective is related to:
   a. Age of the animal        b. Strength of the implant
   c. Size of the animal       d. Proper technique in applying

218. Livestock feeds that contain more than 18% crude fiber when dry are called:
   a. Roughages                b. Concentrates
   c. Palatable                d. Legumes
219. Protein supplements are livestock feeds containing what percent protein:
   a. 6-8  
   b. 10-12
   c. 16-18  
   d. 20 or more

220. A ration that tastes good to the animal which promotes consumption is said to be:
   a. Balanced  
   b. Palatable
   c. Concentrated  
   d. Nutritional

221. The average length of estrus in cattle is:
   a. 16-18 hours  
   b. 24-36 hours
   c. 3 days  
   d. 5 days

222. The length of gestation for swine is:
   a. 98 Days  
   b. 114 Days
   c. 148 Days  
   d. 283 Days

223. The process of giving birth to a new animal is:
   a. Gestation  
   b. Parturition
   c. Fertilization  
   d. Ovulation

224. The first successful cloning of livestock was done in 1996 with:
   a. Sheep  
   b. Swine
   c. Cattle  
   d. Goats

225. The mating of animals of different families within the same breed is:
   a. Inbreeding  
   b. Crossbreeding
   c. Grading Up  
   d. Out-crossing

226. What is the most common disqualification in rules for registering livestock in an association?
   a. Weight  
   b. size
   c. Color Markings  
   d. Eyes

227. When judging market class steers, what term is used to describe the amount of fat cover on the animal:
   a. Condition  
   b. Finish
   c. Carcass merit  
   d. Quality

228. Which judging term refers to the general structure and proportion of the animal’s body:
   a. size  
   b. muscling
   c. Type  
   d. balance
229. The typical market hog will produce a carcass weighing:
   a. 126 lbs      b. 184 lbs
   c. 225 lbs      d. 250 lbs

230. When using high performance data in judging hogs, which is **NOT** one of the indexes used as an EPD (Expected Progeny Differences):
   a. Feed Efficiency Index
   b. Sow Productivity Index
   c. Terminal Sire Index
   d. Maternal Line Index

231. A visual evaluation of the amount of muscle on a hog is best seen by looking at which view of the hog:
   a. side      b. rear
   c. front      d. top

232. Which classes of sheep are bred primarily for meat:
   a. fine wool breeds
   b. medium wool breeds
   c. crossbreed wool breeds
   d. fur sheep breeds

233. The most commonly used method of classifying sheep is by:
   a. Carcass type
   b. Point of origin
   c. Type of wool
   d. Number of young produced

234. Sheep are a major livestock enterprise in which area of the United States:
   a. Southern range
   b. Western range
   c. Eastern range
   d. Northern range

235. In a standard swine identification system, the individual pig number is put in what ear?
   a. Right      b. Left
   c. Both       d. None

236. The science in livestock production that studies the way traits of parents are passed on to the offspring is:
   a. hybrid vigor
   b. heterosis
   c. meiosis
   d. genetics

237. Which species of livestock has a diploid number (number of pairs of chromosomes) of 19?
   a. swine
   b. sheep
   c. goats
   d. cattle

238. What takes place when a sperm cell from the male reaches an egg cell from the female?
   a. mitosis
   b. cell coding
   c. fertilization
   d. spermatozoa
239. Which trait for beef cattle has the highest heritability estimate?
   a. confirmation score at weaning  
   b. birth weight
   c. rib eye area  
   d. fat thickness

240. Which trait in swine has the lowest heritability estimate?
   a. age at puberty  
   b. loin muscle area
   c. percent ham  
   d. birth weight

241. Genotype refers to the:
   a. combination of genes  
   b. placing of genes
   c. number of genes  
   d. splicing of genes

242. When chromosomes pairs are divided in such a manner that each gamete has one type of chromosome, the process is called:
   a. meiosis  
   b. mitosis
   c. sequencing  
   d. cell division

243. The characteristics of an animal that are inheritable are passed from one generation to the next by:
   a. sperm cells  
   b. egg cells
   c. diploids  
   d. genes

244. Sperm cells are produced in the:
   a. epididymis  
   b. testicles
   c. scrotum  
   d. vas deferens

245. The average gestation length for sheep is:
   a. 114 days  
   b. 148 days
   c. 220 days  
   d. 283 days

246. The length of estrus cycle for sheep is:
   a. 16 days  
   b. 21 days
   c. 28 days  
   d. 35 days

247. The diploid number (pair of chromosomes) for sheep is:
   a. 27  
   b. 36
   c. 19  
   d. 12

248. Breed of beef cattle that combines Hereford, Shorthorn, and Brahman genetics is known as:
   a. Braford  
   b. Brangus
   c. Beef master  
   d. Barzona
249. The first successful cloning of a vertebrate organism from mature body cells occurred in 1996 with which species?
   a. cow       b. pig
   c. sheep     d. goat

250. Which is not a potential benefit of genetic engineering in livestock production?
   a. developing disease resistant animals
   b. developing new species of livestock
   c. specifying the sex of an animal before conception
   d. developing new drugs and vaccines

251. The process of including cows to produce several oocytes during each estrus cycle is:
   a. super ovulation       b. embryo transfer
   c. artificial insemination d. bio-breeding

252. Porcine somatotropin (pST) is a protein produced in which gland of the pig?
   a. lymph      b. pituitary
   c. reproductive d. endocrine

253. Mating animals of the same breed is called:
   a. line breeding       b. crossbreeding
   c. inbreeding         d. straight breeding

254. The mating of two animals that can be traced back to one common ancestor is:
   a. close breeding       b. line breeding
   c. out crossing        d. grading up

255. What is a common disqualification in rules for registering animals in a breed association?
   a. weight       b. size
   c. color markings d. eyes

256. The majority of beef cow herd operations of how many cows?
   a. 1-49 head       b. 50-99 head
   c. 100-499 head    d. over 500 head

257. Which factor does not affect the demand for beef?
   a. the number of head       b. availability of imported beef
   c. income per person        d. meat preferences

258. What is a disadvantage of raising beef?
   a. high death losses
   b. demand for beef
   c. beef nutrition requirement for roughages
   d. time required to develop a cattle herd
259. Which of the listed regions of the United States produces the most beef cattle?  
   a. Pacific 
   b. Cornbelt 
   c. North Plains 
   d. Southeast 

260. How many breeds of beef cattle are available to producers in the United States?  
   a. 12 
   b. 20 
   c. 33 
   d. 50+ 

261. The Simmental breed of beef cattle which dates back to the Middle Ages, originated in which country?  
   a. France 
   b. Australia 
   c. Switzerland 
   d. Germany 

262. Which breed of cattle was the first to be imported to the United States?  
   a. Shorthorn 
   b. Hereford 
   c. Angus 
   d. Charolais 

263. Which breed of cattle is classified as a Box indicus type?  
   a. Pinzgauer 
   b. Simmental 
   c. Galloway 
   d. Brahman 

264. Approximately what percent of cash income from livestock and crops come from beef in the United States?  
   a. 7% 
   b. 18% 
   c. 22% 
   d. 31% 

265. Which breed of cattle was in existence in Italy before the time of the Roman Empire?  
   a. Devon 
   b. Chianina 
   c. Beef master 
   d. Brahman 

266. In 1927, the United States Congress appropriated money for which breed of cattle that were almost extinct?  
   a. Polled Hereford 
   b. Red Angus 
   c. Santa Gertrudis 
   d. Texas Longhorn 

267. The Beef Promotion and Research Act of 1985 established a check-off amount for every head of beef sold in the United States of:  
   a. $ .50 
   b. $ 1.00 
   c. $ 2.00 
   d. $ 5.00
268. The method of marketing where cattle are sold by public bidding to the highest bidder is:
   a. public stockyards  b. contract sales
   c. auction markets    d. terminal markets

269. Shrinkage of cattle as they are moved to market is **NOT** affected by:
   a. market price      b. weather
   c. sex of the animal  d. length of the fill-back period

270. The country of origin labeling became mandatory in what year?
   a. 1942              b. 1986
   c. 1999              d. 2004

271. A beef carcass with slightly abundant marbling with a maturity level A will be what grade?
   a. Prime            b. Choice
   c. Select           d. Cutter

272. Which beef cattle yield grade indicates the highest yield of lean meat?
   a. Yield Grade 4    b. Yield Grade 5
   c. Yield Grade 3    d. Yield Grade 1

273. Which of the following states produces the most swine?
   a. Missouri         b. Minnesota
   c. North Carolina   d. Oklahoma

274. A 200lb market hog would drink approximately _____ gallons of water a day:
   a. 2.5              b. 7.5
   c. 5.0              d. 10.0

275. Which breed of swine was developed in the United States?
   a. Berkshire        b. Poland China
   c. Yorkshire        d. Pietrain

276. Approximately what percent of the market hogs sold in the United States are priced on the basis of carcass merit?
   a. 25%              b. 45%
   c. 70%              d. 90%

277. A futures contract for marketing hogs is based on units. One trading unit equals:
   a. 10,000 pounds    b. 20,000 pounds
   c. 30,000 pounds    d. 40,000 pounds

278. The traditionally recommended weight for marketing slaughter hogs has been:
   a. 150-180 pounds   b. 180-200 pounds
   c. 200-220 pounds   d. 230-260 pounds
279. Which states produces the most sheep and lambs?
   a. California  
   b. Wyoming  
   c. Oklahoma  
   d. Ohio

280. The majority of Sheep operations produce:
   a. less than 100 head  
   b. 100 to 499 head  
   c. 500 to 1000 head  
   d. more than 1000 head

281. Which breed of sheep is classified as a fine wool breed?
   a. Hampshire  
   b. Rambouillet  
   c. Southdown  
   d. Corriedale

282. Lambs under three months of age weighing less than 60 pounds sold in specialty markets between Christmas and Easter are called:
   a. Hothouse lambs  
   b. Spring lambs  
   c. Veal lambs  
   d. Holiday lambs

283. Lambs prices average higher during which period of the year?
   a. June through August  
   b. September through November  
   c. December through February  
   d. March through May

284. The thickness of fat over the rib eye determines the yield grade for all slaughter sheep. A slaughter sheep with 0.26 to 0.35 inches of fat will grade:
   a. Yield Grade 2  
   b. Yield Grade 3  
   c. Yield Grade 4  
   d. Yield Grade 1

285. What organ in the animal’s body produces bile?
   a. Gall Bladder  
   b. Pancreas  
   c. Cecum  
   d. Liver

286. Which nutrients have the highest energy value?
   a. Proteins  
   b. Calcium  
   c. Copper  
   d. Fats

287. Which major mineral is often lacking in animal rations is:
   a. Selenium  
   b. Calcium  
   c. Copper  
   d. Iodine

288. Which trait in beef cattle has the highest heritability estimate?
   a. Rib eye area  
   b. Birth weight  
   c. Carcass grade  
   d. Dressing percent
289. What is the first step in balancing a ration for cattle, sheep, or swine?
   a. Choose the feeds to be used in the ration
   b. Consult a table of nutrient requirements
   c. Identify the age, weight, and the function of the animals(s) being fed
   d. Calculate the amounts of each to use in the ration.

290. What percent of the total income from all livestock and poultry marketing in the U.S. comes from the beef industry?
   a. 18%  b. 28%  c. 38%  d. 58%

291. What breed of beef cattle are the leaner in total number registered since 1970 in the US?

292. Primary nutrients found in commercial fertilizer include all these EXCEPT:
   a. nitrogen  b. phosphorus  c. potassium  d. copper

293. Which of the following wholesale cuts of beef is classified as High-value?

294. Which of the following breeds has the highest standard birth weights used in performance testing programs?

295. When judging a market class of beef cattle, the term referring to the natural fleshing of the animal is:
   a. type  b. muscling  c. finish  d. balance

296. Feeding programs for beef cow-calf herds are based on the use of:
   a. roughages  b. concentrates  c. grains  d. proteins

297. Known as a long wool breed of sheep

298. What type of identification is commonly used especially with large herds and required by law in most western states?
   a. tattooing  b. neck chains  c. branding  d. ear tags
299. Which is NOT one of the main minerals needed in rations for finishing cattle?
   a. phosphorus  b. salt  c. copper  d. calcium

300. _______ is a disease caused by bacteria in cattle that may remain in the soil for forty years or more.
   a. anthrax  b. blackleg  c. foot rot  d. lumpy jaw

301. A nutritional problem where rapid fermentation in the rumen causing too much gas being produced is called:
   a. bloat  b. flurosis  c. traumatic gastritis  d. urinary calcull

302. Which of the following states has the highest number of hogs and pigs on farms (breeding and market)?

303. Which major breed of swine sets the standard for performance of litter size?

304. Which pure breed of swine developed in the early 1700’s was the first to be imported to the U.S.?
   a. Berkshire  b. Landrace  c. Tamworth  d. Pietrain

305. Most breeds of swine imported to the United States were developed in:

306. Known as the swelling of the tissue that attaches the hoof to the foot
   a. founder  b. fescue foot  c. inter-toxemia  d. white muscle

307. Which is one of the four major minerals frequently added to hog rations?
   a. Iron  b. Copper  c. Selenium  d. Calcium

308. White muscle disease occurs in areas where there is a deficiency in what element?
   a. Selenium  b. Copper  c. Iron  d. Aluminum

309. The time during which an animal is pregnant is:
   a. parturition  b. fertilization  c. gestation  d. Ovulation
310. Which of the following beef breeds would have the lowest standard birth weight?

311. What is the period of time when a female will accept the male for breeding?
   a. gestation  b. Estrus  c. Conception  d. ovulation

312. The sudden death of heavily muscled hogs is referred to as:

313. The leading state for sheep production is:

314. The American Merino breed of sheep is classified as a:
   a. fine wool breed  b. fur sheep breed  c. long wool breed  d. carpet wool breed

315. Which breed of sheep was developed in France?

316. Ideally calving season for a cow-calf producer should last:
   a. approx. 60 days  b. approx. 110 days  c. approx. 90 days  d. approx. 140 days

317. Which is NOT a function of the skeletal system?
   a. strength  b. mineral storage  c. blood storage  d. protection

318. Hormones are organic catalysts that influence the growth and development of the body is produced in the:
   a. lymphatic system  b. urinary system  c. endocrine system  d. digestive system

319. In what part of the respiratory system are the passages from the nostrils and the mouth joined?
   a. pharynx  b. trachea  c. bronchi  d. alveoli
320. Breed of swine known for its brownish-red color:
a. Duroc  b. Hampshire
c. Yorkshire  d. Poland China

321. The release of the egg from the ovary is called:
a. fertilization  b. ovulation
c. parturition  d. reproduction

322. Which region of the United States produces the most beef cattle?
a. Pacific  b. Cornbelt
c. Southwest  d. Lake States

323. The Chianina breed of beef cattle which is one of the oldest originated in which country?
a. France  b. Australia
c. Italy  c. Egypt

324. Which breed of cattle is classified as a *Bos Indicus* type?
a. Pinzgauer  b. Simmental
c. Galloway  d. Brahman

325. What is the standard number of days that beef cattle weaning weights are adjusted to?
a. 180  b. 205
c. 225  d. 260

326. Adapting the behavior of animals to fit the need of humans is called:
a. training  b. domestication
c. breeding  d. culling

327. Which species of livestock does NOT belong to the family Bovidao?
a. sheep  b. cattle
c. swine  d. goats

328. Average beef consumption in the United States ranges from ________ pounds per person per year:
a. 25-35  b. 40-50
c. 60-70  d. 85-95

329. According to the USDA, the greatest expense in the production of livestock is:
a. contract and hired labor  b. livestock purchased
c. fuel and electricity  d. feed purchase
330. Which of the following states is in the top ten of the production of beef cattle, sheep, and swine?
   a. Texas  
   b. Nebraska  
   c. California  
   d. Iowa

331. Joints in the skeleton of animals that allow free movement and have fluid filled cavity are called:
   a. Fibrous Joints  
   b. diarthroses joints  
   c. Amphithroses joints  
   d. cartilaginous joints

332. Swine breed known for its belted coloration:
   a. Berkshire  
   b. Yorkshire  
   c. Land Race  
   d. Hampshire

333. A burdizzo is a tool used in;
   a. castration  
   b. feet trimming  
   c. worming  
   d. dehorning

334. The ventricles and the atria are part of which system in the animal’s body?
   a. Circulatory  
   b. respiratory  
   c. muscle  
   d. digestive

335. Progesterone and estrogen are both hormones produced in which gland?
   a. testes  
   b. adrenal  
   c. pancreas  
   d. ovary

336. In the ruminant digestive system, where is hydrochloric acid produced?
   a. rumen  
   b. omasum  
   c. reticulum  
   d. abomasum

337. Which amino acid is essential in swine rations?
   a. Cytosine  
   b. lysine  
   c. glycine  
   d. proline

338. Which fat soluble vitamin is associated with good bone development?
   a. vitamin A  
   b. vitamin D  
   c. vitamin E  
   d. vitamin K

339. Which vitamin do animals tend to produce enough of so that it does not need to be included as a specific nutrient in their rations?
   a. vitamin A  
   b. vitamin C  
   c. vitamin D  
   d. vitamin E

340. The diseases present in the animal’s body at levels too low to produce visible effects are:
   a. sub therapeutic  
   b. chemobiotics
341. Feed additives used to control worms and other internal parasites are:
   a. coccidiostats  
   b. anthelmintics  
   c. probiotics  
   d. antimicrobials

342. __________ is a synthetic hormone feed additive that suppresses estrus.
   a. monesin  
   b. melengestrol acetate  
   c. bovetec  
   d. estrogen

343. Which agency regulates the use of feed additives in the United States?
   a. United States Department of Agriculture (USDA)  
   b. Federal Register (FR)  
   c. Food and Drug Administration (FDA)  
   d. Animal Health and Production Division (AHPD)

344. Breed of swine that is black with six white points:
   a. Duroc  
   b. Berkshire  
   c. Land Race  
   d. Yorkshire

345. Which is NOT a consideration for the use of feed additives?
   a. increased nutrient content  
   b. improved feed efficiency  
   c. promote faster gains  
   d. improved animal health

346. ______ was one of the exotic breeds of cattle from Europe introduced into the United States in the 1960s and the 1970s.
   a. red angus  
   b. Murray grey  
   c. chianina  
   d. Santa gertrudis

347. Which breed of cattle is the most popular in Europe?
   a. Angus  
   b. Maine Anjou  
   c. Simmental  
   d. shorthorn

348. Which breed of cattle was originally developed as a draft or work animal?
   a. Maine Anjou  
   b. Galloway  
   c. Brahman  
   d. hays converter

349. Which breed of cattle is believed to have descended from Bos longifrons, a small type of aboriginal cattle in Britain?
   a. pinzgauer  
   b. gelbvieh  
   c. shorthorn  
   d. Devon

350. Which breed is classified as a “dual-purpose” breed (milk and meat)?
   a. highland  
   b. south Devon  
   c. romagnola  
   d. limousin
351. Frame score is a measurement based on observation and height measurement when calves are evaluated at ______ days of age.
   a. 125      b. 205  
c. 285      d. 305

352. ______ is a measure of the degree of difference between the offspring of a specific bull and the offspring of the average bull of the breed and the trait being measured.
   a. MPV       b. SPF  
c. OSB       d. EPD

353. The carcass merit of cattle is expressed by yield grade. Which yield grade is assigned when a carcass yields from 50.1% - 52.3%?
   a. yield grade 1 b. yield grade 2  
c. yield grade 3 d. yield grade 4

354. Which of the following terms should only be used when talking reasons for breeding cattle and not for market classes?
   a. muscling b. balance  
c. condition d. finish

355. A chronic degenerative disease that affects the central nervous system of cattle (also called “mad cow disease”):
   a. bovine spongiform encephalopathy  
b. bovine respiratory syncytial virus  
c. infectious bovine rhinotracheitis  
d. keratoconjunctivitis

356. Brisket disease affects the ______ in cattle?
   a. heart b. brain  
c. lungs d. stomach

357. Which breed of swine has an average litter size ratio of 100 when compared to other breeds?
   a. Berkshire b. Duroc  
c. Hampshire d. Yorkshire

358. Breed of beef cattle that originated on the King’s Ranch in Texas:
   a. Angus b. Hereford  
c. Brahman d. Santa Gertrudus

359. Which disease affects the turbinate bones in swine?
   a. Actinobacillus b. Eperythrozoonosis  
c. Atrophic Rhinitis d. Leptospirosis
360. Known as the “true stomach” of a Ruminant:
   a. Rumen  b. Reticulum
   c. Abomasum  d. Omasum

361. Known as the White Faced breed of cattle:
   a. Hereford  b. Angus
   c. Galloway  d. Devon

362. A chemical element or compound that aids in the support of life:
   a. nutrient  b. acid
   c. bile  d. carbohydrates

363. The dry weight of most roughage in grains contains ______ % carbohydrates.
   a. 20–25%  b. 40-50%
   c. 60-80%  d. 90-100%

364. Organic compounds made up of amino acids:
   a. sugars  b. starches
   c. proteins  d. carbohydrates

365. If an animal takes in more protein than it needs it will pass it on through:
   a. feces  b. gas
   c. urine  d. gas and feces

366. Feed additives became common around:
   a. 1950  b. 1970
   c. 1990  d. 2000

367. Livestock feeds which contain less than 18% Crude fiber:
   a. roughage  b. grass
   c. nodule  d. concentrate

368. Plants which take nitrogen from the air:
   a. roughage  b. legume
   c. nodule  d. grass

369. Fats stored within the muscle:
   a. marbling  b. loxin
   c. concentrate  d. vitamin

370. What is an un-born animal still in mothers’ womb?
   a. loxin  b. uterus
   c. fetus  d. feces
371. Amount or difference of traits passed from parents to young
   a. genetics      b. heredity
   c. traits        d. phenotype

372. The father of genetics
   a. Wilson       b. Smith
   c. Mendel       d. Fendler

373. Mating of the male and female
   a. fertilization b. copulation
   c. partuation    d. sex

374. Outer most part of the female reproductive tract
   a. Cervix       b. Vagina
   c. Vulva        d. Uterus

375. Place where the fetus grows
   a. stomach      b. uterus
   c. cervix       d. vulva

376. Best indication of estrus in swine
   a. grunting     b. mounted by others
   c. nervousness  d. squealing

377. Best indication of estrus in cattle
   a. urinating    b. mounting by others
   c. mooing       d. restlessness

378. Release of the egg from the ovary
   a. fertilization b. ovulation
   c. copulation    d. estrus

379. Common growth implant used in beef cattle:
   a. Loxin        b. Ralgro
   c. Anthelmintics d. Minerals

380. A PH of ________ is considered to be very acidic:
   a. 7           b. 6.5
   c. 6.3         d. 4.8

381. Approximately __% of US beef is imported.
   a. 1%          b. 10%
   c. 20%         d. 30%
382. The US is developed into ______ cattle growing regions.
   a. 4  b. 6  c. 8  d. 10

383. ____ is the cattle breed originating in Italy.
   a. Devon  b. Chianinia  c. Hereford  d. Angus

384. Developed from the four yellow breeds:
   a. Devon  b. Galloway  c. Limousins  d. Gelbvieh

385. Probably the first breed of cattle on North America:

386. Frame scores range from:
   a. 0-7  b. 1-7  c. 0-9  d. 1-9

387. Body condition scores range from:
   a. 0-7  b. 1-7  c. 0-9  d. 1-9

388. Henry Clay of Kentucky was first to import this beef breed:
   a. Hereford  b. Angus  c. Brahman  d. Devon

389. Beef breed that originated in Scotland:

390. Vitamins most commonly feed to cattle include all but ____.

391. Poland China hogs originated in:
   a. Europe  b. Ohio  c. Russia  d. France

392. One precaution in allowing too much intake of legumes is:
   a. overeating  b. bloat  c. blackleg  d. gas
393. Grass tenany is common when cattle are deficient of:
   a. oxygen     b. calcium
   c. magnesium     d. iron

394. Derived from the bos indicus type of cattle:
   a. Brahman     b. Shorthorn
   c. Angus     d. Hereford

395. Duroc hogs have originated in the:
   a. Virgin Isles     b. Bahamas
   c. US     d. Florida Panhandle

396. Litter numbers are put in the pigs:
   a. right ear     b. left ear
   c. both ears     d. lips

397. Respiration rate of swine:
   a. 8-13     b. 20-28
   c. 35-45     d. 50-60

398. Pork pieces are usually higher in:
   a. spring     b. summer
   c. fall     d. winter

399. The growing and feeding of calves from weening to feedlot:
   a. Backgrounding     b. Pre-Conditioning
   c. Marketing     d. Pasturing

400. Processing a feed through a hammer mill:
   a. Grinding     b. Rolling
   c. Pelleting     d. Fermenting

401. Protein supplements contain what percent protein:
   a. 15%     b. 18%
   c. 20%     d. 30%

402. Fee charge for the use of stockyard facilities:
   a. Consignment     b. Yardage
   c. Terminal Charge     d. Broker’s Fee

403. Which is NOT a USDA quality grade?
   a. Choice     b. Prime
   c. Good     d. Select
404. Hogs are usually profitable _______ percent of the time:
a. 40%  
  b. 50%  
  c. 70%  
  d. 90%

405. The age that an animal reaches sexual maturity is:
a. addescence  
  b. puberty  
  c. maturation  
  d. partuation

406. Act of giving birth:
a. partuation  
  b. lactation  
  c. puberty  
  d. gestation

407. The reflex and response that an animal has at birth is:
a. conditioning  
  b. instinct  
  c. intelligence  
  d. reasoning

408. Swine are in a class of animal which consume both plant and animal meat known as:
a. herbivore  
  b. carnivore  
  c. omnivore  
  d. non-ruminant

409. Subcutaneous injections are given:
a. in the neck  
  b. in the rump  
  c. mouth  
  d. under skin

410. If possible the preferred injection site is the:
a. neck  
  b. loin  
  c. rump  
  d. rear

411. The most prevalent fine-wool breed of sheep in the U.S. is the:
a. Columbia  
  b. Hampshire  
  c. Desert  
  d. Ramboullet

412. The amount of fat over a market lamb is referred to as:
a. condition  
  b. fat  
  c. fleshing  
  d. finish

413. A 1200lb steer would have a carcass weight of:
a. 600 lbs  
  b. 660 lbs  
  c. 720 lbs  
  d. 800 lbs

414. A 250 lb barrow will have a carcass weight of:
a. 150 lbs  
  b. 175 lbs  
  c. 200 lbs  
  d. 220 lbs
415. A 130 lb whether will have a carcass weight of:
a. 65 lbs  
b. 80 lbs  
c. 95 lbs  
d. 100 lbs

416. Swine breed originating in Denmark:
a. Landrace  
b. Duroc  
c. Poland China  
d. Hampshire

417. A whorl is known in swine as a:
a. invented teat  
b. hair problem  
c. snout problem  
d. foot problem

418. Hampshire, Berkshire, Yorkshire have what in common:
a. color  
b. number of teats  
c. ears  
d. feed efficiency

419. The process of preparing calves for the stress of the feed lots is:
a. stocking  
b. pre-conditioning  
c. finishing  
d. fatting

420. Normal pulse rate of a beef animal:
a. 20-30  
b. 40-50  
c. 60-70  
d. 80-90

421. Breed of beef animal composed of Brahman and Angus bloodlines:
a. Beef Master  
b. Braford  
c. Brangus  
d. Galloway

422. A cow that has extremely strait legs is known as:
a. post legged  
b. sickle-hocked  
c. cow-hocked  
d. crippling

423. Pregnancy checking is referred to as:
a. gestation  
b. parturition  
c. palpation  
d. pregnancy checking

424. Polled means:
a. without horns  
b. hornless  
c. genetically dehorned  
d. horned

425. When income is high people tend to purchase more:
a. pork  
b. chicken  
c. beef  
d. lamb
426. Normal respiration rate of beef cattle:
   a. 10-30  
   b. 40-50  
   c. 60-70  
   d. greater than 70

427. The state that leads in cattle production:
   a. California  
   b. Texas  
   c. Indiana  
   d. Iowa

428. Diets for beef cattle consist mainly of:
   a. corn  
   b. wheat  
   c. roughages  
   d. concentrates

429. Exotic breeds of cattle include all these except:
   a. Hereford  
   b. Maine-Anjou  
   c. Limousin  
   d. Simmental

430. First exotic breed to be brought into the U.S.:
   a. Charolais  
   b. Maine-Anjou  
   c. Pinzgucr  
   d. Brahman

431. Polled Herefords originated in what state?
   a. Alabama  
   b. Iowa  
   c. Kansas  
   d. Georgia

432. Herefords originated in:
   a. France  
   b. England  
   c. U.S.  
   d. Germany

433. Simmental cattle originated in:
   a. France  
   b. England  
   c. Switzerland  
   d. Germany

434. The Barzona breed was developed in:
   a. France  
   b. Kentucky  
   c. Arizona  
   d. Florida

435. Beef cattle have multiple stomachs the largest one is the:
   a. omasun  
   b. reticulum  
   c. rumen  
   d. abmasums

436. Beef master cattle are derived from crossing Brahman, Shorthorn, and:
   a. Angus  
   b. Shorthorn  
   c. Salers  
   d. Hereford
437. Muscling in slaughter steers is best observed from what view?
   a. front       b. front at 45 degree angle
   c. side        d. rear

438. Difficult birth is known as:
   a. lactation   b. parturition
   c. dystocia    d. insemination

439. The ideal age for a heifer to calve is:
   a. 20 months   b. 24 months
   c. 28 months   d. 36 months

440. Highest possible quality grade:
   a. choice      b. select
   c. good        d. prime

441. The “best” yield grade is:
   a. 1           b. 2
   c. 3           d. 4

442. Blackleg is a disease caused by bacteria caused by the absence of:
   a. sun         b. light
   c. moisture    d. oxygen

443. Enteritis is also called or referred to as:
   a. blackleg    b. scours
   c. dystocia    d. pneumonia

444. A heart disease of cattle that occurs at a high altitude:
   a. founder     b. brisket disease
   c. bloat       d. flourosis

445. The least amount of beef cattle would be found in the _____ region
   a. SW          b. SE
   c. NE          d. N Plains

446. These cattle are red, white, or roan in color:
   a. Pinzguar    b. Hereford
   c. South Devon d. Shorthorn

447. Avg. dressing % of a beef carcass:
   a. 40%         b. 50%
   c. 60%         d. 70%
448. Record of the ancestry of an animal:
   a. history  b. genetics  
c. pedigree  d. genealogy

449. Scrotal circumference is measured in:
   a. in² b. cm
   c. cm² d. in

450. “Soundness” is a judging term used to describe:
   a. harder handling  b. thickness  
c. freedom of movement  d. internal volume

451. When judging breeding animals what term is used to describe fat?
   a. condition  b. finish  
c. merit  d. quality

452. Grass tetany occurs most often in cattle during what period?
   a. Pregnancy  b. Weaning
   c. Finishing  d. Lactating

453. White muscle disease is caused by lack of?
   a. copper  b. selenium
   c. calcium  d. iron

454. Percent of sheep produced on range:
   a. 25%  b. 50%
   c. 70%  d. 90%

455. State with the largest # of sheep:
   c. Tex.  d. Mo.

456. Fine wool breeds of sheep include all of these except:
   a. Rambouillet  b. American Merino
   c. Debouillet  d. Columbia

457. Fine wool breeds of sheep are known for their:
   a. meat  b. yolk
   c. wool  d. ranging ability

458. Medium wool breeds were developed mainly for their:
   a. meat  b. wool
   c. yolk  d. ranging ability

459. Long wooled breeds were developed in:
   a. Germany  b. England
460. Long wooled breeds of sheep include these, except:
   a. Suffolk          b. Cotswold
   c. Lincoln          d. Romney

461. The tendency for sheep to stay together is called
   a. herding          b. gregarious
   c. flocking          d. migration

462. The only breed of sheep raised in the U.S. for Fur is the
   a. Cotswold          b. Monte dale
   c. Dorset            d. Karakul

463. Breed of sheep that ewes are known to breed out of season
   a. Dorsets           b. Hampshires
   c. Suffolks          d. Monte dale

464. Medium wool breed of sheep that originated in the U.S.
   a. Montedale         b. Suffolks
   c. Hampshires         d. Oxford

465. The breed of sheep used primarily in the formation of all medium wooled breeds
   a. Hampshire          c. Southdown
   c. Suffolk            d. Montedale

466. Medium breed of sheep that originated in Africa
   a. Tunis              b. Southdown
   c. Monte dale         d. Dorset

467. Originated in the U.S. in 1912 by crossing Lincoln and Rambouillet:
   a. Dorset            b. Columbia
   c. Suffolk            d. Hampshire

468. Ewes with a high % of fine wool breeding and are produced in the Western range area:
   a. Native Ewes         b. Western Ewe
   c. Commercial Ewe      d. Continental Ewe

469. Sheep lose their teeth at about 5-6 years of age. This condition is known as:
   a. Fletching          b. Gumming
   c. Numbness            d. Broken Jaw

470. A large dose of medicine mixed with a liquid and put down an animals throat:
   a. Drench              b. Vaccine
   c. Suppository      d. Laxative
471. An older mature ram will usually breed about:
   a. 10 ewes. b. 15 ewes
   c. 30 ewes d. Greater than 30

472. Lambs on a grain diet should be vaccinated for:
   a. worms b. overeating disease
   c. pinkeye d. mastitis

473. Before breeding season, if the ewe is not sheared, she would:
   a. tagged or crutched b. docked
   c. wormed d. synchronized

474. A lambs navel is disinfected after birth with:
   a. Iodine b. Alcohol
   c. Epson salt d. Vinegar

475. Cutting off part of a lambs tail or a pigs tail is called:
   a. Fletching b. Flushing
   c. Docking d. Tagging

476. The digestive system of a sheep starts at the:
   a. Esophagus b. Nostrils
   c. The mouth d. Larynx

477. A ________ is the total amount of feed intake in a 24 year period:
   a. Meal b. Ration
   c. Daily intake d. Supplements

478. A castrated male sheep is referred to as a:
   a. Barrow b. Wether
   c. Whether d. Weather

479. Sac-like covering that holds the testicles:
   a. sheath b. scrotum
   c. brisket d. spermatic cord

480. Tube-like member that carries the urine from the bladder:
   a. sheath b. penis
   c. urethra d. cervix

481. The American Merino is classified as a:
   a. Long wool b. Medium wool
   c. Fine wool d. Fur sheep
482. The physical appearance of an animal is known as:
   a. genotype      b. Phenotype
   c. balance       d. performance

483. Most popular breed of Medium wool sheep in the U.S.:
   a. Hampshire      b. Suffölk
   c. Rambouillet    d. Dorset

484. Helminthes are used in the management of:
   a. external parasites     b. internal parasites
   c. predators              d. foot rot

485. An udder disease in ewes and cows is called:
   a. mastitis      b. scrapping
   c. blue tongue   d. bloat

486. Blue tongue is a virus and is spread by:
   a. flies       b. wind
   c. man        d. gnats

487. Over eating disease is a problem of sheep on grain. It is also called:
   a. enter toxemia     b. scolding
   c. trichormorosis   d. bloat

488. Average number of litters per year in swine:
   a. 1.2      b. 1.8
   c. 2.5      d. 3.1

489. Castrated male beef animal is known as:
   a. Stag      b. Steer
   c. Stear     d. Heifer

490. The basic protein source for most animal rations:
   a. bone meal      b. corn
   c. corn meal      d. soybean meal

491. Corn is approximately what percent of protein:
   a. 5%      b. 9%
   c. 15%     d. 20%

492. Normal pulse rate of a sheep:
   a. 10-20      b. 30-40
   c. 70-80      d. 90-100
493. Normal respiration rate of a sheep:
   a. 12-20
   c. 80-90
   b. 40-50
   d. Greater than 90

494. Most serious health problems of sheep:
   a. flies
   c. internal parasites
   b. gnats
   d. foot scald

495. Most sheep are sold:
   a. auctions
   c. locally
   b. directly to packers
   d. privately

496. Refers to the yield of closely trimmed retail cuts:
   a. cutibility
   c. yield grade
   b. grade
   d. marbling

497. Wool prices are usually lowest in:
   a. spring
   c. fall
   b. summer
   d. winter

498. Difficulty in passing feces:
   a. bloat
   c. constipation
   b. pinning
   d. tagging

499. Wool prices are usually highest in:
   a. winter
   c. early fall
   b. late spring
   d. late fall

500. Meat from a two year old sheep or older:
   a. mutton
   c. veal
   b. lamb
   d. lamburgers