

# Veterinary Science CDE Exam Questions

Updated 3/30/18

## Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. The term for lying on the side is
  - a. Cranial
  - b. ventral
  - c. dorsal
  - d. lateral recumbency
2. The term for toward the nose
  - a. medial
  - b. distal
  - c. rostral
  - d. proximal
3. The term *caudal* means
  - a. toward the head
  - b. toward the nose
  - c. toward the stomach
  - d. toward the tail
4. A sheep is called a
  - a. bovine
  - b. porcine
  - c. caprine
  - d. ovine
5. The term *anorexia* means
  - a. tired or inactive
  - b. not eating
  - c. difficulty urinating
  - d. vomiting
6. The suffix *-stomy* means
  - a. to make an incision
  - b. to create a new opening
  - c. to suture to
  - d. to remove
7. The term *cysto-* refers to the
  - a. urinary bladder
  - b. urine
  - c. urinalysis
  - d. uterus
8. Which description demonstrated direct supervision?
  - a. The supervisor only needs to be physically on the premises.
  - b. The supervisor needs to be on the premises and near enough to be of assistance.
  - c. The supervisor doesn't need to be on the premises, just familiar enough with the animal to have left instructions for its care.
  - d. The supervisor needs to be in the same room.
9. What is the definition of "ethics"?
  - a. Laws passed by the government
  - b. Any behavior that is acceptable to you and your friends
  - c. Your religious beliefs
  - d. Rules and principles that govern proper conduct
10. Which of the following statements are true regarding confidentiality of medical records and cases?
  - a. Medical records and cases are ethically considered confidential
  - b. It is ok for information to be shared with anyone associated with the hospital
  - c. It is ok to share medical information with your own family members
  - d. Veterinary medical records and case information are not confidential, only human medical records are confidential.

11. Which of the following is NOT a breach of contract between a veterinarian and a client?
- a. A client refuses to pay for services that were approved in a consent form.
  - b. A boarding dog escapes from the hospital premises.
  - c. A veterinarian guarantees a cure and the patient dies.
  - d. All of the above are breaches in contract.
12. Which federal agency is responsible for overseeing the manufacture and distribution of drugs used in animals?
- a. Food and Drug Administration (FDA)
  - b. Animal Welfare Administration (AWA)
  - c. Drug Enforcement Agency (DEA)
  - d. Occupational Safety and Health Administration (OSHA)
13. The jugular vein is located
- a. On the inside of the front leg
  - b. Inside the thigh on the rear leg
  - c. on either side of the neck
  - d. in the tail
14. The gestation length for a dog is
- a. 30
  - b. 63
  - c. 72
  - d. 96
15. Which of the following is a bacterial disease?
- a. Leptospirosis
  - b. Coccidiosis
  - c. ringworm
  - d. giardiasis
16. Which of the following is a viral disease?
- a. Coccidiosis
  - b. Tetanus
  - c. rabies
  - d. rocky mountain spotted fever
17. A parasite that lives on hair is called
- a. Flea
  - b. Tick
  - c. mite
  - d. lice
18. Cats have an average of \_\_\_\_\_ muscles in the body
- a. 100
  - b. 200
  - c. 300
  - d. 400
19. \_\_\_\_\_ can build up in the cat's stomach due to excessive grooming
- a. Bacteria
  - b. Hairballs
  - c. antibodies
  - d. weight
20. Cats go through a polyestrus cycle every \_\_\_\_\_ days.
- a. 5-7
  - b. 10-14
  - c. 14-21
  - d. 15-16
21. The total number of eggs in a nest at one time is called a:
- a. Brood
  - b. Flock
  - c. group
  - d. clutch
22. What is used to determine the gender of a bird?
- a. Feather sample
  - b. Blood sample
  - c. DNA test
  - d. all of the above
23. "Wet tail" causes the following in hamsters:
- a. Weight loss
  - b. Diarrhea
  - c. nasal discharge
  - d. all of the above

24. Which of the following is NOT a ruminant?
- a. Sheep
  - b. Bison
  - c. elk
  - d. ostrich
25. The term for a cow or dairy animal in labor is called:
- a. Freemartin
  - b. Freshening
  - c. springing
  - d. heifer
26. What is the gestation length of a cow?
- a. 180 days
  - b. 283 days
  - c. 195 days
  - d. 205 days
27. Which of the following diseases is a reproductive disease that may cause sterility and abortion in cattle?
- a. Leptospirosis
  - b. Bovine viral diarrhea
  - c. brucellosis
  - d. displaced abomasum
28. Which of the following metabolic conditions causes low blood sugar?
- a. Ketosis
  - b. Bloat
  - c. grass tetany
  - d. mastitis
29. Which of the following diseases is tested with a Coggins test?
- a. Equine herpes virus
  - b. Equine encephalomyelitis
  - c. Equine Infectious Anemia
  - d. tetanus
30. What is the gestation length of a horse?
- a. 365 days
  - b. 283 days
  - c. 340 days
  - d. 300 days
31. What age should a horse have all of its adult teeth in place?
- a. 5 years
  - b. 2 years
  - c. 6 years
  - d. 4 years
32. Which of the following diseases is caused by Clostridium?
- a. Rabies
  - b. Swamp fever
  - c. Influenza
  - d. Tetanus
33. Which of the following is NOT a part of the horse?
- a. Fetlock
  - b. Shank
  - c. poll
  - d. pastern
34. What areas of the teeth may need routine floating?
- a. Cups
  - b. Molars
  - c. wolf teeth
  - d. points
35. A common procedure that is used for the purpose of identification is
- a. Tail docking
  - b. Ear notching
  - c. snaring
  - d. castration
36. A reproductive disease in swine that is highly contagious and has no cure is:
- a. Brucellosis
  - b. Leptospirosis
  - c. dermatitis
  - d. pseudo rabies
37. What is the gestation length of sheep?
- a. 148-150 days
  - b. 140-142 days
  - c. 135-138 days
  - d. 114-116 days
38. Which type of digestive system do goats have?
- a. Monogastric
  - b. Ruminant
  - c. non-ruminant
  - d. avian

39. What is the gestation length of goats?
- a. 100-135 days
  - b. 168-171 days
  - c. 148-151 days
  - d. 90-100 days
40. What is the incubation time of chickens?
- a. 11 days
  - b. 21 days
  - c. 18 days
  - d. 15 days
41. What disease causes respiratory distress that may make a bird twist its neck?
- a. Marek's disease
  - b. Infectious bronchitis
  - c. Newcastle disease
  - d. Avian influenza
42. The study of the functions of the human body is called
- a. Anatomy
  - b. Physiology
  - c. pathology
  - d. histology
43. The type of tissue that lines internal organ structures and serves as a protective layer is called
- a. Connective
  - b. Nervous
  - c. muscular
  - d. epithelial
44. What type of joint rotates around a fixed point?
- a. Ball and socket joint
  - b. Fibrous joint
  - c. hinge joint
  - d. pivot joint
45. Which of the following is part of the appendicular skeleton?
- a. Skull
  - b. Mandible
  - c. femur
  - d. ribs
46. Which of the following is the name of the second cervical vertebra?
- a. Axis
  - b. Cervix
  - c. atlas
  - d. coccyx
47. Which of the following fractures is characterized by a break in a bone that stays in place?
- a. Compound
  - b. Subluxation
  - c. comminuted
  - d. simple
48. The elbow is an example of what type of joint?
- a. Fibrous
  - b. Pivot
  - c. ball & socket
  - d. hinge
49. Hip dysplasia is common in which dog breed
- a. German Shepherd
  - b. Poodle
  - c. beagle
  - d. pug
50. Intervertebral disc disease is common in which dog breed?
- a. Corgi
  - b. Spaniels
  - c. bichon
  - d. Dalmatian
51. Which of the following animals is NOT a ruminant?
- a. Pig
  - b. Bison
  - c. goat
  - d. cow
52. Herbivores would eat which of the following
- a. Corn
  - b. Chicken
  - c. beef
  - d. pork
53. Wavelike motion of the digestive tract.
- a. Papillae
  - b. Mucosa
  - c. peristalsis
  - d. fundus

54. Substance created by the liver.

- a. **bile**
- b. mucosa
- c. glucose
- d. trypsin

55. A condition resulting from fluid loss in the body is

- a. digestion
- b. peristalsis
- c. **dehydration**
- d. diabetes

56. A swollen and painful abdomen is a sign of

- a. **bloat**
- b. constipation
- c. overeating
- d. dehydration

57. The thin inner layer of heart muscle is called

- a. myocardium
- b. **endocardium**
- c. epicardium
- d. pericardium

58. A condition characterized by a lack of oxygen and blood reaching the tissues is

- a. **shock**
- b. arrhythmia
- c. cardiac arrest
- d. myocardial infarction

59. Inflammation of the lungs is a characteristic of

- a. **pneumonia**
- b. asthma
- c. bordetella
- d. heaves

60. A tear in the chest muscle allowing muscle to protrude through is called

- a. pleural friction rub
- b. heaves
- c. **diaphragmatic hernia**
- d. roaring

61. A respiratory infection caused by transport of livestock is called

- a. bordetella
- b. **shipping fever**
- c. asthma
- d. heaves

62. Which of the following is a building block of protein that forms in chains?

- a. Fatty acids
- b. Lipids
- c. **amino acids**
- d. enzymes

63. Which of the following is an example of a mineral?

- a. B12
- b. Sunlight
- c. D
- d. **iron**

64. Which of the following organs produces bile?

- a. **Liver**
- b. Kidney
- c. gallbladder
- d. pancreas

65. Which of the following diets is used for an animal that is showing or hunting?

- a. Maintenance diet
- b. Reproduction diet
- c. growth diet
- d. **work diet**

66. Which of the following is a type of roundworm?

- a. Trichuris vulpine
- b. **Toxocara cati**
- c. ancylostoma caninum
- d. dirofilaria immitis

67. Which of the following parasites can cause a skin condition in humans called *cutaneous larval migrans*?

- a. Roundworm
- b. Whip worm
- c. **hookworm**
- d. heartworm

68. A parasite that is flat and segmented, living in the small and large intestine is called

- a. Strongyles
- b. Coccidian
- c. giardia
- d. **tapeworm**

69. A parasite known to cause Lyme disease is
- a. Tick
  - b. Flea
  - c. mite
  - d. fly
70. Which animal is at the greatest risk of developing West Nile Virus from the bite of a mosquito?
- a. Cat
  - b. Horse
  - c. goat
  - d. dog
71. Which of the following is the most common source of coccidian?
- a. water contamination
  - b. food contamination
  - c. bird droppings
  - d. rabbit droppings
72. Which of the following adult parasites is visible to the naked eye?
- a. Roundworm
  - b. Whipworm
  - c. hookworm
  - d. coccidian
73. Which of the following insects spread heartworm disease?
- a. Ticks
  - b. Fleas
  - c. mosquitos
  - d. flies
74. Which of the following types of behaviors is used to teach a young horse to lift its feet by touching and handling the feet shortly after birth?
- a. Modeling
  - b. Imprinting
  - c. instinctive
  - d. conditioning
75. Which of the following is a term for when an animal eats its own waste materials?
- a. Coccidian
  - b. Maternal
  - c. pheromone
  - d. coprophagia
76. What type of aggression is displayed when an animal protects its owner?
- a. Dominance aggression
  - b. Territorial aggression
  - c. fear aggression
  - d. redirected aggression
77. Which of the following factors should be considered when handling animals?
- a. Temperature
  - b. Stress
  - c. teamwork
  - d. all of the above
  - e. None of the above.
78. Which of the following restraint equipment should not be used on cats?
- a. Rabies pole
  - b. Muzzle
  - c. anesthesia chamber
  - d. squeeze cage
79. Which of the following is not an example of a veterinary safety device?
- a. Scavenger hose for anesthesia
  - b. Medical waste bag
  - c. sterile surgery gloves
  - d. all of the above
80. Which of the following is not a class of veterinary hazards?
- a. Biological hazard
  - b. Sharps hazard
  - c. chemical hazard
  - d. physical hazard
81. Which of the following agents is used to treat cancer?
- a. Zoonosis
  - b. Bacteria
  - c. chemotherapy
  - d. all of the above
82. Which of the following items is available to determine hazardous ingredients and treatment protocols for products?
- a. OSHA binder
  - b. Right-to-know station
  - c. MSDS binder
  - d. none of the above

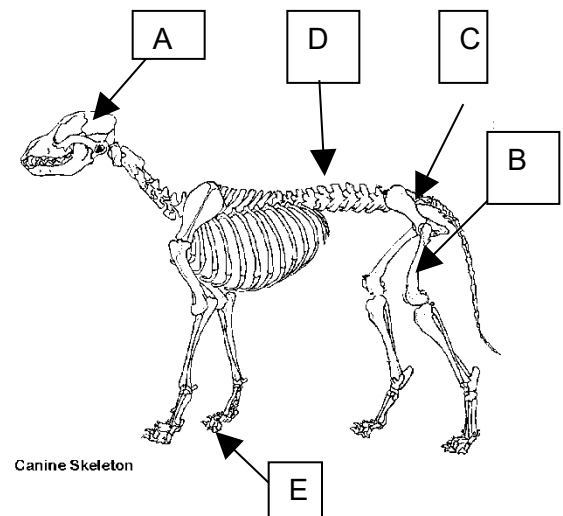
83. Which of the following is not an example of an aseptic practice?
- Wearing exam gloves
  - Treating patients in isolation before treating surgical patients
  - Wearing a gown in the isolation ward
  - Washing hand after removing gloves
16. Which of the following is not a class of sanitation?
- Aseptic technique
  - sterilization
  - Disinfecting
  - cleaning
84. Which of the following agents is used to disinfect?
- Alcohol
  - chlorhexidine
  - Iodine
  - all of the above
85. Which of the following is the typical time a mercury thermometer needs to be in the rectum until reading?
- 1 minute
  - 60 seconds
  - 30 seconds
  - both A and C
86. Which of the following is a term for hair loss?
- Alopecia
  - anastomosis
  - Anorexia
  - atrophy
87. Which of the following is the definition of arrhythmia?
- Difficulty breathing
  - abnormal heart beat
  - Swishing sound within the heart
  - sound of cellophane within the heart
88. Which of the following is also the heart rate?
- Temperature
  - respiration
  - Pulse
  - weight
89. Which of the following is NOT a cause of stress?
- Change in diet
  - infectious disease
  - Change in environment
  - all of the above cause stress
90. Which of the following is the definition of hyperplasia?
- Increased amounts of tissue
  - lack of tissue
  - Decreased amounts of tissue
  - abnormal tissue
91. Which of the following is a term for a vaccine?
- Biological
  - supplemental
  - Pharmaceutical
  - nosocomial
92. Which of the following is a purpose for bandaging?
- Protection
  - immobilization
  - Prevention of movement
  - all of the above
93. Which of the following size syringes should be used to administer a 1 ml amount of substance?
- 10 ml syringe
  - 12 ml syringe
  - 3 ml syringe
  - 6 ml syringe
94. Which of the following is the reason for tapping the end of the syringe after filling it?
- To remove air bubbles
  - to mix the syringe contents
  - To read the syringe level
  - all of the above
95. Which of the following is the reason for aspirating the syringe prior to injection?
- To remove air bubbles
  - to make certain the syringe is not in a blood vessel
  - to not produce pain
  - all of the above

96. Which of the following is a site for an IM injection?
- Quadricep muscles
  - Hamstring muscles
  - pectoral muscles
  - all of the above
97. Which of the following animals may get ear mites?
- Dogs
  - Rabbits
  - cats
  - all of the above
98. Which of the following defines the term efficacy?
- The amount of a drug
  - The strength and life of a drug
  - the trade name of a drug
  - the dosage of a drug
99. Which of the following is NOT a route of giving medications?
- By mouth
  - Aural
  - ophthalmic
  - dram
100. Which of the following is NOT a sign of pain?
- Vocal
  - Restless
  - eating and drinking well
  - chewing at incision
101. Which of the following is NOT a statement referring to surgical preparation of the patient?
- The surgical margin should extend an inch for the incision location
  - The surgical scrub should be done in a clockwise circular motion
  - The surgical scrub should be done working from the outside inward
  - The surgical area should be clipped with #40 blades
102. Which of the following agencies usually regulate exotic species?
- Department of Wildlife
  - Department of Agriculture
  - Department of Treasury
  - Department of State
103. What is the correct genus for Goats
- Ovine
  - Caprine
  - Bovine
  - Porcine
104. What is the correct genus for Cattle
- Avian
  - Caprine
  - Bovine
  - Ovine
105. Ovine is the correct genus for what animal
- Goat
  - Cattle
  - Sheep
  - Horses
106. A young female horse under three is called a
- Filly
  - Colt
  - Mare
  - Foal
107. A newborn horse is called a
- Filly
  - Foal
  - Colt
  - Mare
108. A mature female pig that has had a litter is called a
- Sow
  - Gilt
  - Ewe
  - Boar
109. A mature female sheep is called a
- Heifer
  - Doe
  - Sheep
  - Ewe
110. A mature female goat is called a
- Ewe
  - Heifer
  - Doe
  - Wether



111. A pullet is a:  
 a. Mature female chicken c. Young female chicken  
 b. Mature male chicken d. Young male chicken
112. A wether is a  
 a. Castrated Goat c. Castrated Chicken  
 b. Intact male Sheep d. Castrated Horse
113. Mature female cattle are called  
 a. Heifers c. Steers  
 b. Cows d. Calves
114. A mature intact male horse is called a  
 a. Stallion c. Stud  
 b. Gelding d. Steer
115. A young male chicken is called:  
 a. Roster c. Pullet  
 b. Cock d. Cockerel

116. A gelding is a  
 a. Stud c. Castrated Goat  
 b. Castrated Horse d. Castrated Goat
117. What does the label A represent on the Canine skeleton?  
 a. Skull c. Pelvis  
 b. Scapula d. Vertebrae
118. What does the label B represent on the Canine skeleton?  
 a. Tibia c. Femur  
 b. Fibula d. Humerus
119. What does the label C represent on the Canine skeleton?  
 a. Radius c. Pelvis  
 b. Ulna d. Fibula
120. What does the label D represent on the Canine skeleton?  
 a. Ribs c. Skull  
 b. Vertebrae d. Pelvis
121. What does the label E represent on the Canine skeleton?  
 a. Phalanges c. Tibia  
 b. Scapula d. Ulna



122. A Collie is in what grouping of dogs  
 a. Working c. Toy  
 b. Herding d. Sporting
123. Which of the following breeds is in the Non-Sporting group?  
 a. Pug c. Labrador  
 b. Poodle d. German Shepherd
124. Bone is made up of:  
 a. Calcium, phosphorus, and collagen fibers c. Marrow, cartilage and tendons  
 b. Vitamins A, B, and C d. Nitrogen, phosphorus and potassium
125. What is the function of bone marrow?  
 a. Produces blood cells. c. Provides movement  
 b. Provides support d. All of the above
126. Where is bone marrow found?  
 a. In the hollow shaft of long bones c. In the hollow shaft of short bones  
 b. In the hollow shaft of flat bones d. In the hollow shaft of joints

127. X-rays are used to take a special photograph called a  
a. Photograph                      c. X-ray  
b. Radiograph                      d. Bone scan
128. Swine and Humans have what type of digestive systems?  
a. Monogastric                      c. Ruminant  
b. Monogastric rumination                      d. Polygastric
129. Rabbits and Horses have what type of digestive system?  
a. Avian digestion                      c. Hindgut fermenter  
b. Hindgut rumination                      d. Ruminant
130. Cattle have what type of digestive systems?  
a. Monogastric                      c. Hindgut Fermenter  
b. Ruminant                      d. Monogastric Rumination
131. Which one of these digestive organs is found only in the bird?  
a. Cecum                      c. Crop  
b. Stomach                      d. Gall Bladder
132. The muscular tube connecting the mouth to the stomach is called the  
a. Stomach                      c. Pharynx  
b. Esophagus                      d. Trachea
133. The majority of absorption of nutrients in non-ruminants takes place here  
a. Stomach                      c. Omasum  
b. Rumen                      d. Small Intestine
134. The major role of this organ in the digestive process is to provide bile salts to the small intestine and detoxify the blood.  
a. Gall Bladder                      c. Liver  
b. Pancreas                      d. Kidney
135. Simple stomachs are called  
a. Monogastrics                      c. Ruminants  
b. Singular Stomachs                      d. Gastritis
136. In the ruminant which compartment of the stomach looks like a honeycomb  
a. Abomasum                      c. Cecum  
b. Reticulum                      d. Rumen
137. Continuous regurgitation, chewing and swallowing is called  
a. Digestion                      c. Eructation  
b. Rumination                      d. Mastication
138. Very muscular organ, used to grind food in birds is called the  
a. Crop                      c. Beak  
b. Gizzard                      d. Proventriculus
139. Wavelike motions that propel food through the esophagus are called what?  
a. Peristalsis                      c. Eructation  
b. Rumination                      d. Anastalsis
140. How many stomach compartments does a cow have?  
a. One                      c. Three  
b. Two                      d. Four

141. What is mastication and why is it important?
- Chewing; to increase surface area of food for easier digestion
  - Chewing; to decrease surface area of food for easier digestion
  - Swallowing; to increase wavelike motions
  - Swallowing; to decrease wavelike motions

142. This is produced excessively in anticipation of food.

- Bile
- Saliva
- Mucous
- Acid

143. What does the label B represent on the Avian digestive system?

- Crop
- Proventriculus
- Gizzard
- Ceca

144. What does the label A represent on the Ruminant digestive system?

- Abomasum
- Omasum
- Rumen
- Reticulum

145. What does the label C represent on the Monogastric digestive system?

- Pancreas
- Stomach
- Large Intestine
- Liver

146. What does the label D represent on the Hindgut fermenter digestive system?

- Cecum
- Large Intestine (Colon)
- Stomach
- Rumen

147. What is the main function of carbohydrates?

- Provide Energy
- Growth and repair of cells
- Assist in taste recognition
- Medium for chemical reactions

148. Accounts for 70% or more of the composition of animals?

- Blood
- Skin
- Fat
- Water

149. Corn, wheat, oats, and barley are considered what type of carbohydrates?

- Protein carbohydrates
- Fatty carbohydrates
- Simple Sugar
- Starch

150. Which nutrient contains the greatest amount of energy?

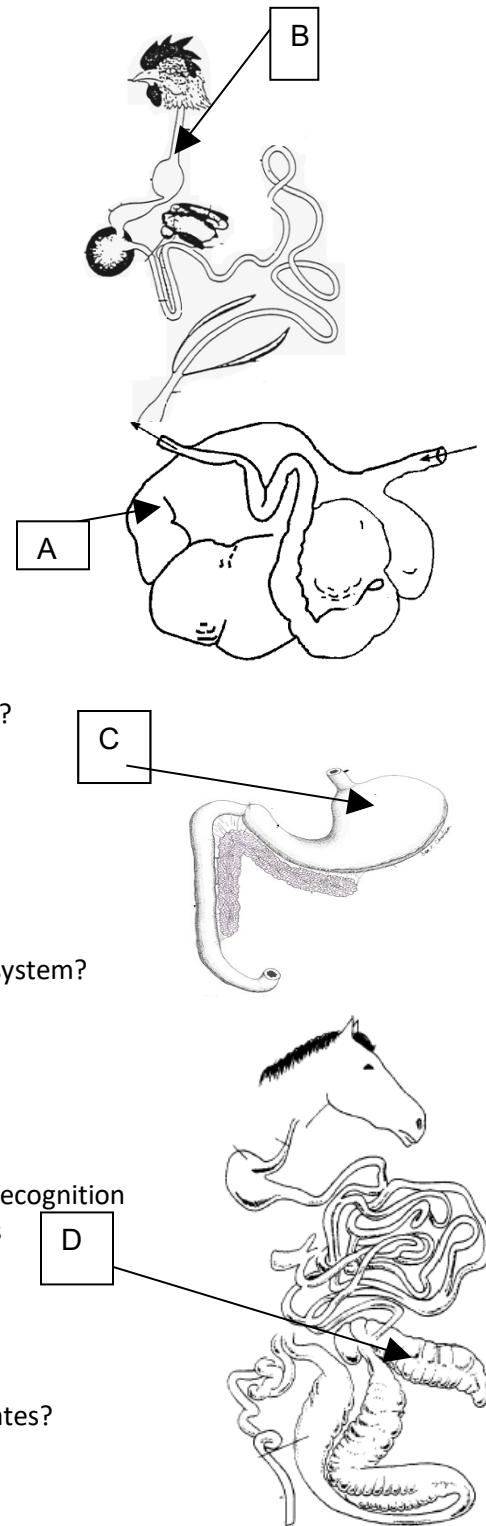
- Water
- Minerals
- Fats
- Vitamins

151. This nutrient is essential because it is needed throughout life for growth and repair and is used for energy only if needed.

- Carbohydrates
- Protein
- Fats
- Minerals

152. Which of the following is a fat-soluble vitamin?

- Vitamin C
- Vitamin A
- Vitamin B6
- Vitamin B12



153. Which of the following is a water-soluble vitamin?

- a. Vitamin E
- b. Vitamin D
- c. Vitamin A
- d. **Vitamin C**

154. Protein consists of strings of building blocks called?

- a. Amino chains
- b. **Amino acids**
- c. Acetic acids
- d. RNA

155. Which of the following is a trace mineral?

- a. **Zinc**
- b. Sodium
- c. Calcium
- d. Phosphorus

156. Which of the following is a macro mineral?

- a. **Sodium**
- b. Zinc
- c. Copper
- d. Selenium

157. Label A represents what on the example feed tag?

- a. Name of Feed
- b. Use of Feed
- c. Ingredients
- d. **Manufacturer**

158. Label B represents what on the example feed tag?

- a. **Guaranteed Analysis**
- b. Name of Feed
- c. Use of Feed
- d. Manufacturer

159. Label C represents what on the example feed tag?

- a. Use of Feed
- b. Manufacturer of Feed
- c. **Ingredients**
- d. Manufacturer

160. The entire coat of wool shorn from the sheep at one time is called

- a. Fiber
- b. Staple
- c. **Fleece**
- d. Wool

161. What does the label A represent on the sheep?

- a. **Loin**
- b. Hip
- c. Withers
- d. Neck

162. What does the label B represent on the sheep?

- a. Poll
- b. Face
- c. Muzzle
- d. **Neck**

163. What does the label C represent on the sheep?

- a. Twist
- b. Dock
- c. Loin
- d. **Rump**

164. What does the label D represent on the sheep?

- a. Cannon Bone
- b. Pastern
- c. **Hoof**
- d. Hock

165. What is the purpose of the marking harness?

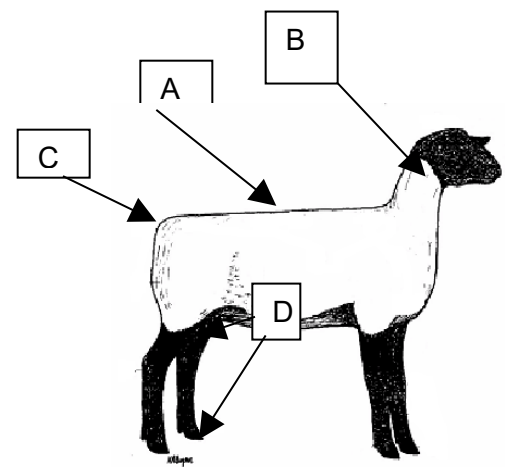
- a. Identifies which rams are ready for breeding
- b. **Provides a signal of which ewes were bred and when**
- c. For cosmetic purposes
- d. Identifies which ewes are ready for breeding

166. What is the purpose of docking the tails of sheep?

- a. Sheep do not have tails naturally.
- b. **To help keep the sheep clean from manure**
- c. For appearance only
- d. In order to show sheep at shows

Figure: Example Feed Tag

| BLUEBIRD 12% TEXTURED HORSE FEED<br>FOR MAINTENANCE OF MATURE HORSES                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Crude Protein (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12%         |
| Crude Fat (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3.0%        |
| Crude Fiber (Max) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 12.0%       |
| Calcium (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.0%        |
| Calcium (Max) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .5%         |
| Phosphorus (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1.0%        |
| Copper (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20 PPM      |
| Zinc (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 40 PPM      |
| Selenium (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.1 PPM     |
| Vitamin A (Min) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2,000 IU/LB |
| Grain Products, Plant Protein Products, Processed Grain<br>By-Products, Molasses Products, Roughage Products<br>25%, Vitamin A Supplement, Vitamin D3 Supplement,<br>Vitamin E Supplement, Vitamin B12 Supplement,<br>Riboflavin Supplement, Pyridoxine Hydrochloride, Folic<br>Acid, Biotin, Thiamine, Calcium Carbonate, Salt, Dicalcium<br>Phosphate, Manganese Oxide, Ferrous Sulfate, Copper<br>Oxide, Magnesium Oxide, Zinc Oxide, Ethylenediamine<br>Dihydrochloride, Cobalt Carbonate, Potassium Chloride. |             |
| Feeding Directions: Feed 1/2 lb. of feed per 100 lb. of<br>body weight for the maintenance of mature horses. Feed<br>good, clean hay at the rate of 1 to 1 1/2 lb. per 100 lb. body<br>weight daily. Provide fresh, clean water at all times,<br>except to hot, tired horses.<br>Important: Feed hay along with this ration, as per<br>directions.                                                                                                                                                                 |             |
| BlueBird Feed Mill<br>Anytown, Oklahoma 77777<br>50 Lb. Net Weight (22.68 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |



167. What does the label A represent on the chicken?

- a. Breast
- b. Wattle

c. Comb  
d. Saddle

168. What does the label B represent on the chicken?

- a. Breast
- b. Wattle
- c. Comb
- d. Saddle

169. What does the label D represent on the chicken?

- a. Breast
- b. Wattle
- c. Comb
- d. Saddle

170. What does the label E represent on the chicken?

- a. Breast
- b. Wattle
- c. Comb
- d. Saddle

171. Chickens raised for meat production are called:

- a. Cornish Game
- b. Layers
- c. Broilers
- d. Poultry

172. When chicks become too hot they:

- a. They lay down or pile into corners of the brooder
- b. They chirp a lot and huddle together
- c. They are evenly spaced under the heat lamp
- d. They chirp a lot and pile into the corners of the brooder

173. What does the label A represent on the hog?

- a. Ham
- b. Jowl
- c. Loin
- d. Stifle

174. What does the label B represent on the hog?

- a. Ham
- b. Rump
- c. Jowl
- d. Back

175. What does the label C represent on the hog?

- a. Ham
- b. Rump
- c. Stifle
- d. Back

176. In the universal ear notching system of hogs, what does the right ear number represent?

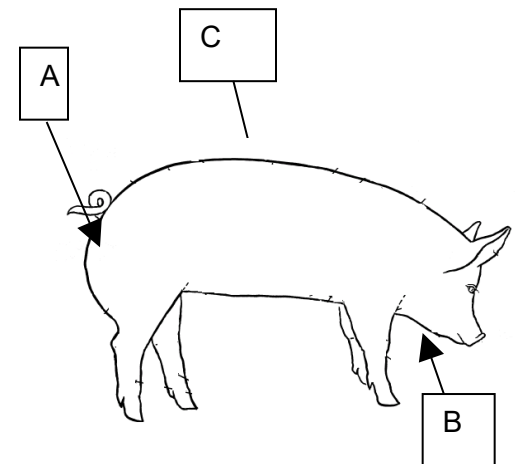
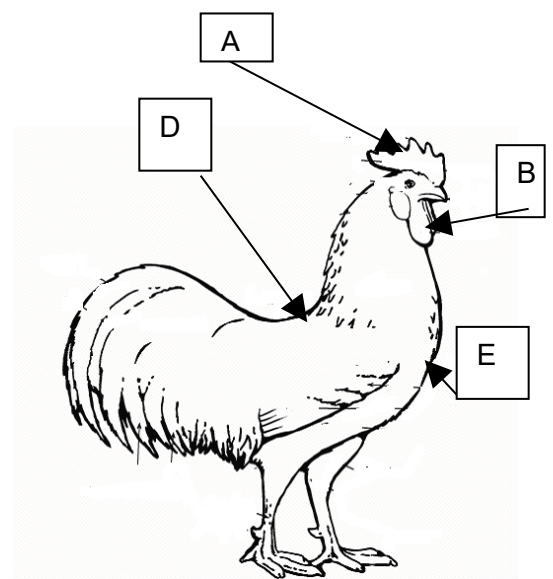
- a. Individual Pig number
- b. The Sows number
- c. Litter number
- d. Number of piglets in the litter

177. Name the type of hog operation that raises hogs from birth to slaughter weight

- a. Breeding Stock
- b. Farrowing Operations
- c. Finishing Operations
- d. Farrow to Finish

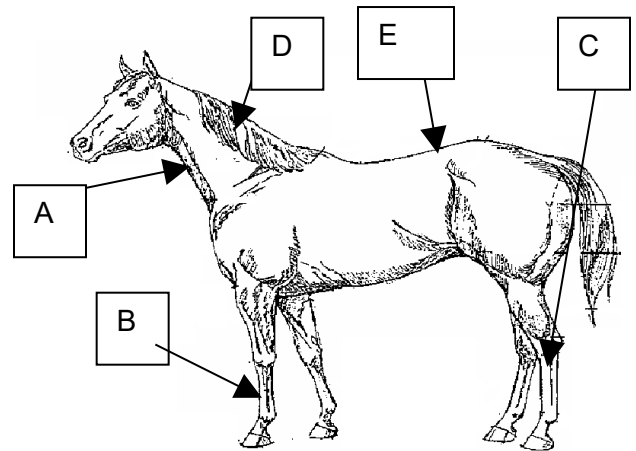
178. Name the type of hog operation that purchases weaned piglets and raises them to market weight

- a. Seedstock
- b. Farrowing Operations
- c. Finishing Operations
- d. Farrow to Finish

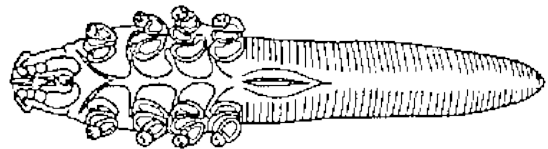


*Sassy is an 18-month-old (1 ½ years) female horse who measures 10 hands. Please answer the following three questions regarding Sassy.*

179. How many inches is Sassy?  
a. 14 inches                      c. 40 inches  
b. 24 inches                      d. 42 inches
180. At this size what type of horse would Sassy be considered  
a. Horse                              c. Pony  
b. Short Horse                      d. Draft
181. According to her age and sex Sassy would be called a?  
a. Filly                                c. Stallion  
b. Mare                                d. Gelding
182. Measurement term used in horses from ground to withers.  
a. Foot                                c. Yard  
b. Hand                                d. Inches
183. A pony cannot be greater than:  
a. 14 hands                          c. 12 hands  
b. 14.2 hands                          d. 10 hands
184. The breed of horse commonly used for harness racing in Michigan.  
a. Quarter horse                      c. Standardbred  
b. Thoroughbred                      d. Arabian
185. What does the label A represent on the horse?  
a. Shoulder                          c. Forearm  
b. Chest                                d. Neck
186. What does the label B represent on the horse?  
a. Gaskin                              c. Pastern  
b. Cannon bone                          d. Coronet
187. What does the label C represent on the horse?  
a. Withers                              c. Loin  
b. Croup                                d. Hock
188. What does the label D represent on the horse?  
a. Loin                                  c. Back  
b. Croup                                d. Withers
189. What does the label E represent on the horse?  
a. Stifle                                c. Fetlock  
b. Gaskin                                d. Croup
190. The term for away from the midline is  
a. medial                                c. Proximal  
b. lateral                                d. Distal
191. The term that refers toward the back area or above is  
a. ventral                                c. cranial  
b. dorsal                                d. caudal
192. The term that means toward the head is  
a. ventral                                c. cranial  
b. dorsal                                d. caudal
193. Disease of heart muscle is  
a. Cardiopathy                          c. cardiovalvopathy  
b. cor pulmonale                          d. cardiomyopathy
194. Heart enlargement is  
a. cardiac swelling                          c. cardiac dilation  
b. cardiac augmentation                          d. cardiomegaly



195. The blood vessels that carry blood from the heart to the lungs are the  
 a. pulmonary veins c. vena cava  
 b. **pulmonary arteries** d. aorta
196. The contraction phase of the heartbeat is the  
 a. septum c. **systole**  
 b. diastole d. tachycardia
197. The myocardium receives its blood supply from the  
 a. aorta c. vena cava  
 b. **coronary arteries** d. subclavian artery
198. The organism that causes heartworm is:  
 a. ***Dirofilaria immitis*** c. *Giardia*  
 b. *Taenia pisiformis* d. Protozoa
199. The most common endoparasite of puppies and kittens is:  
 a. Flea c. mite  
 b. **Roundworm** d. protozoa
200. What parasite transmits Lyme disease?  
 a. *Dirofilaria immitis* c. Lice  
 b. Heartworm d. **Tick**
201. To remove a tick you should:  
 a. Use a match to burn the tick off c. Pour alcohol on the tick, then pull it off  
 b. Cut the tick off with a knife d. **Use tweezers to grasp the head and pull straight out**
202. Label this external parasite.  
 a. Flea c. Walking Dandruff  
 b. **Demodex** d. Ear mite
203. Which phylum does the flea belong to:  
 a. Platyhelminthes c. **Arthropoda**  
 b. Nematoda d. Sacrodina
204. Which of the following is not a mite?  
 a. Otodectes c. Demodex  
 b. Cheyletiella d. **Ixodes**
205. What is the intermediate host of Dipylidium?  
 a. Mice c. Ticks  
 b. **Flea** d. Mite
206. The suffix -cyte means  
 a. **Cell** c. Breathing  
 b. Water d. Disease
207. The abbreviation 'stat' means  
 a. Difficulty c. New  
 b. **Immediately** d. Many
208. The prefix 'Hydr/o' means  
 a. Ear c. **Water**  
 b. Lake d. Eating/swallowing
209. The abbreviation 'DOB' means  
 a. Date of Belonging c. **Date of Birth**  
 b. Death of Bunny d. Dead on Birth
210. The abbreviation 'DSH' means  
 a. **Domestic Short Hair** c. Do Save Horse  
 b. Dog Short Hair d. Domestic Soft Hair



211. The suffix '–lysis' stands for what  
a. Pertaining to c. Deficiency of  
b. **Destruction of** d. Many
212. The suffix '–penia' stands for what  
a. Pertaining to c. **Deficiency of**  
b. Destruction of d. Many
213. The abbreviation 'ml' also could be stated as  
a. cl c. cd  
b. **cc** d. mc
214. The term 'ad lib' means  
a. Many c. **as many as you want**  
b. pertaining to d. in the water
215. The prefix 'post' means  
a. before c. **after**  
b. during d. next day
216. The hormone testosterone is produced by the:  
a. Epididymis c. Scrotum  
b. **Leydig cells** d. Seminiferous Tubules
217. The hormone that is produced by the developing follicles on the ovary.  
a. **Estrogen** c. Progesterone  
b. Prostaglandins d. Testosterone
218. Meiosis in male for sperm production takes place here:  
a. Prostate c. Epididymis  
b. **Seminiferous tubules** d. Vas deferens
219. Prostaglandins are released from what organ if fertilization does not take place.  
a. **Uterus** c. Infundibulum  
b. Oviduct d. Ovary
220. Name the stage of estrous in which the egg is released into the infundibulum.  
a. Proestrus c. Metestrus  
b. **Estrus** d. Diestrus
221. Squeeze chutes are a form of restraint most often used with \_\_\_\_\_.  
a. **Cattle, horses, and sheep** c. Cats and dogs  
b. Cats d. reptiles
222. \_\_\_\_\_ is a steam-pressure sterilizer that uses heat to destroy microorganisms on instruments.  
a. A retort c. An asepsis  
b. A radiator d. **An autoclave**
223. The root word or combining form of the medical term that refers to the lung is \_\_\_\_\_.  
a. Derm or dermat c. **Pulmo or pulmon**  
b. Cardi d. Thorac
224. Docking is the removal of an animal's \_\_\_\_\_.  
a. Testicles c. Horns  
b. **Tail** d. Claws
225. Baby dogs are born in groups of 1 to 10 puppies, known as \_\_\_\_\_.  
a. Broods c. **Litters**  
b. Orphans d. Bitches
226. \_\_\_\_\_ exams are often used to determine the presence of internal parasites in dogs.  
a. **Fecal** c. Ear  
b. Mouth d. Skin



227. Which type of tissue covers body surfaces and lines body cavities as skin?  
a. Nervous tissue                      c. Muscular tissue  
b. Connective tissue                  d. Epithelial tissue
228. Bone that has the appearance of visible spaces within it is known as \_\_\_\_\_ bone.  
a. Cancellous                          c. Haversian  
b. Woven                                d. Compact
229. The study of the functions of the cells, tissues, organs, and systems of an organism is \_\_\_\_\_.  
a. Anatomy                              c. Homeostasis  
b. Physiology                            d. Botany
230. Cell \_\_\_\_\_ is the differences that allow cells to perform unique activities.  
a. Multiplication                      c. Division  
b. Physiology                            d. Specialization
231. A cat should be \_\_\_\_\_ to protect it against diseases such as rabies and feline leukemia.  
a. Spayed                                c. Vaccinated  
b. Neutered                              d. Washed
232. Which of the following is a multicellular organism that lives in or on another animal, from which it receives its nutrients?  
a. A bacteria                            c. A protozoa  
b. A parasite                              d. A virus
233. A *balling gun* is used to deliver medications \_\_\_\_\_.  
a. Orally                                  c. Topically  
b. Rectally                                d. Subcutaneously
234. \_\_\_\_\_ are immune substances produced in the body, allowing animals to withstand exposure to disease.  
a. Biologicals                            c. Antibodies  
b. Disinfectants                        d. Antibiotics
235. Which of the following types of disease is related to a physical injury to the animal?  
a. Contagious                            c. Morphological  
b. Nutritional                            d. Physiological
236. Soaking items in a chemical disinfectant until they are used is called \_\_\_\_\_.  
a. Ultrasound                            c. Filtration  
b. Cold sterilization                    d. Cleaning
237. Removing particles from the air using physical barrier is called \_\_\_\_\_.  
a. Ultrasound                            c. Filtration  
b. Cold sterilization                    d. Cleaning
238. Passing high frequency sound waves through a solution to create a vibration that scrubs an object to remove debris is called \_\_\_\_\_.  
a. Ultrasound                            c. Filtration  
b. Cold sterilization                    d. Cleaning
239. \_\_\_\_\_ are biohazard materials such as needles, scalpel blades, and syringes that must be disposed of in red, sealed containers labeled with the biohazard symbol.  
a. Radioactive material                c. MSDS  
b. Dosimeters                            d. Sharps
240. \_\_\_\_\_ lists information about a chemical including manufacturer information, hazard ingredients, physical and chemical characteristics, fire and explosion hazard data, health hazard data, precautions for safe handling and use and control measures.  
a. Pesticide Label                      c. Inventory Sheet  
b. Material Safety Data Sheet        d. Order sheet

241. To remove a tick you should \_\_\_\_\_.  
 a. Use a match to burn the tick off c. Pour alcohol on the tick, then pull it off  
 b. Cut the tick off with a knife d. Use tweezers to grasp the head and pull straight out
242. The clinical signs of heartworm are: \_\_\_\_\_.  
 a. Vomiting, deep cough, anemia c. Deep cough, irregular heartbeat, exercise intolerance  
 b. Anemia, deep cough, irregular heart beat d. irregular heartbeat, anemia, exercise intolerance
243. One disease that is transmitted by the tick is called \_\_\_\_\_.  
 a. Rocky Mountain Spotted Fever c. Salmonella  
 b. Toxoplasmosis d. Ringworm
244. What parasite transmits Lyme disease?  
 a. *Dirofilaria immitis* c. Lice  
 b. Heartworm d. Tick
245. The organism that causes heartworm is called \_\_\_\_\_.  
 a. *Dirofilaria immitis* c. *Giardia*  
 b. *Taenia pisiformis* d. Protozoa
246. The most common endoparasite of puppies and kittens is called \_\_\_\_\_.  
 a. Flea c. Mite  
 b. Roundworm d. Protozoa
247. Cats are \_\_\_\_\_.  
 a. Omnivores c. Obligate carnivores  
 b. Hindgut fermenters d. Mild drinkers
248. The genus and species of the horse is \_\_\_\_\_.  
 a. *Equus caballus* c. *Canis familiaris*  
 b. Equine d. *Bos indicus*
249. Which is largest?  
 a. 700 grams c. 7 ounces  
 b. 7 pounds d. 7 kilograms
250. Which species is not social and should always be kept out of contact from each other?  
 a. Hamsters c. Rats  
 b. Rabbits d. Guinea pigs
251. What is not a class of restraint?  
 a. Chemical c. Physical  
 b. Social d. Psychological
252. A frightened dog might display which of the following behaviors?  
 a. Scanning the area and not paying attention to owner c. Growling  
 b. Hiding behind the owner d. All of the above
253. What learning method are you employing when you remove an unpleasant stimulus after the animal does what you've asked?  
 a. Positive punishment c. Positive reinforcement  
 b. Negative punishment d. Negative reinforcement
254. "Hard pad" disease is also known as \_\_\_\_\_.  
 a. Distemper c. Laminitis  
 b. Calicivirus d. Arthritis
255. Which breed is bigger?  
 a. Quarter horse c. Percheron  
 b. Hackney d. Thoroughbred
256. A "Coggins test" checks for \_\_\_\_\_.  
 a. Equine Infectious Anemia c. Coggins Disease  
 b. Equine Protozoal Meningitis d. Herpes

257. Which of the following characteristics make horses unique among other agricultural species?
- a. Can't vomit
  - b. **A and D**
  - c. Produce more liver enzymes
  - d. No gallbladder Produce more liver enzymes
258. Which of the following is not considered a reportable disease in Michigan?
- a. Johne's
  - b. Rabies
  - c. Sleeping sickness
  - d. **FIV**
259. Which of the following is considered a zoonotic disease?
- a. **Leptospirosis**
  - b. Pneumonia
  - c. Distemper
  - d. Azoturia
260. How many upper incisors would a 4-year-old ram have?
- a. **0**
  - b. 4
  - c. 6
  - d. 12
261. The herding group of dogs is known for their high need of:
- a. Grooming
  - b. **Activity and exercise**
  - c. Attention from strangers
  - d. Food
262. What species has the shortest estrous cycle length?
- a. Cattle
  - b. Swine
  - c. **Sheep**
  - d. Horses
263. Where are most nutrients absorbed in monogastrics?
- a. Stomach
  - b. Large intestine
  - c. Rumen
  - d. **Small intestine**
264. What is supplemented as an injection to newborn piglets because their needs are higher than what is found in milk?
- a. **Iron**
  - b. Magnesium
  - c. Vitamin B
  - d. Colostrum
265. When giving an IM injection to cattle, what site is usually preferred?
- a. **Neck**
  - b. Gluteal muscle
  - c. Jugular Vein
  - d. Loin
266. Where can you find an operculum?
- a. Rabbit mouth
  - b. **Fish gills**
  - c. Horse hoof
  - d. Cattle Stomach
267. Which of the following has a mane and tail the same color as the body?
- a. Palomino
  - b. Bay
  - c. **Chestnut**
  - d. Dun
268. The common name of the distal phalanx is:
- a. Short pastern
  - b. **Coffin**
  - c. Splint
  - d. Stifle
269. Which disease is there not a vaccination available for?
- a. Strangles
  - b. West Nile Virus
  - c. Tetanus
  - d. **EPM**

270. A horse with heaves can be most helped by:
- a. Keeping them indoors
  - b. Regular exercise
  - c. Reducing dust exposure
  - d. Regular hoof trims
271. Which two disorders causes the greatest problems in rats?
- a. Mammary tumors and respiratory infections
  - b. Bloat and scours
  - c. Cancer and bloat
  - d. Snuffles and colic
272. A horse is seen standing with its weight shifted back off its front feet. His feet are hot to the touch. What problem could this horse have?
- a. Laminitis
  - b. Colic
  - c. Lameness
  - d. Fever
273. Cryptorchidism is seen in:
- a. Stallions
  - b. Mares
  - c. Gilts
  - d. Pullets
274. What animal uses their lateral line as a sensory organ?
- a. Fish
  - b. Iguanas
  - c. Sugar Gliders
  - d. Frogs
275. All licensed veterinarians are allowed to \_\_\_\_\_ wild animals like raccoons and foxes.
- a. Rehabilitate
  - b. Euthanize
  - c. Raise as pets
  - d. Capture and neuter
276. A new disease is reported to have a high morbidity rate. What does that mean?
- a. Many animals die
  - b. A few animals die
  - c. Many animals get sick
  - d. A few animals get sick
277. Which is not used to estimate a horse's age by teeth?
- a. Galvayne's groove
  - b. Tartar accumulation
  - c. Angle of teeth
  - d. Cups and stars
278. What water quality parameter is not regularly tested in fisheries?
- a. Nitrate
  - b. Nitrite
  - c. Ammonia
  - d. Acetic acid