51. Russian knapweed will cause what disease in the horse?
   A. Encephalomyelitis
   B. Laminitis
   C. **Nigropallidal encephalomalacia**
   D. SCID

52. At what age do the permanent corner incisors erupt?
   A. 1.5 years
   B. 2.5 years
   C. 3.5 years
   D. **4.5 years**

53. What enzyme is produced in the fundus of the stomach and helps break down proteins?
   A. Amylase
   B. Lipase
   C. **Pepsin**
   D. Protease

54. What is the general term for markings such as a dorsal stripe, cobwebbing on the forehead, zebra stripes on the legs and a wither stripe or shadowing?
   A. Dun marking
   B. Mustang markings
   C. **Primitive markings**
   D. None of the above

55. Which of these feeds is highest in starch?
   A. Beet pulp
   B. **Corn**
   C. Cool Season Grass Hay
   D. Alfalfa Hay

56. What is the term used for a gene that has the ability to mask the genetic makeup of the other gene in an allele pair?
   A. Co-dominant
   B. **Dominant**
   C. Homozygous
   D. Partial-dominant

57. What does the term teratogenic mean?
   A. Compounds that cause brain damage in young horses
   B. **Compounds that cause physical defects in the fetus**
   C. Compounds that cause physical defects in old horses
   D. Compounds that cause brain damage in geriatric horses
58. In equine nutrition, what are NDF and ADF a measure of?
   A. Fat  
   B. Protein  
   C. Fiber  
   D. Minerals

59. What is bradycardia?
   A. Abnormally fast heart rate  
   B. Abnormally slow heart rate  
   C. Cardiac insufficiency  
   D. Enlarged heart

60. What is the definitive host for the protozoa Sarcocystis neurona?
   A. Bat  
   B. Opossum  
   C. Raccoon  
   D. Skunk

61. The inflammation of the bursa located between the thoracic vertebrae and the nuchal ligament of the neck is called?
   A. Brucellosis  
   B. Fistulous withers  
   C. Thoracitis  
   D. Scoliosis

62. Leydig cells are responsible for the production of what two hormones?
   A. Aldosterone and Estrogen  
   B. Estrogen and Progesterone  
   C. Testosterone and Estrogen  
   D. Testosterone and Aldosterone

63. The brachial plexus is the origin for nerves in what area of the body?
   A. Abdomen  
   B. Facial nerves  
   C. Forelegs  
   D. Hindlegs

64. In breeding contracts, what does the statement “live foal” describe?
   A. A foal that is alive  
   B. A foal that stands and nurses  
   C. A foal that was born alive  
   D. A foal that was born alive and died short thereafter

65. What is considered the most important factor when evaluating the quality of a forage at the time of harvest?
   A. Quantity of weeds present  
   B. Rainfall during growth  
   C. Stage of maturity  
   D. Type of forage
66. What is the **primary** vector for the equine disease caused by the bacteria *Borrelia burgdorferi*?
   A. Horse flies
   B. Lice
   C. Mosquitoes
   D. Ticks

67. The proximal and distal sesamoid bones serve as pulleys to change the direction of which specific tendon?
   A. Common digital extensor
   B. Deep digital flexor
   C. Lateral digital extension
   D. Superficial digital flexos

68. What is the common term for aerophagia?
   A. Heaves
   B. Roaring
   C. Windsucking
   D. None of the above

69. What is another name for urticaria?
   A. Alopecia
   B. Atopia
   C. Heaves
   D. Hives

70. Which one of these is a fat-soluble vitamin?
   A. Vitamin C
   B. Vitamin D
   C. Riboflavin
   D. Biotin

71. Which of these plants is toxic to horses?
   A. Bahia grass
   B. Johnson grass
   C. Ladino clover
   D. None of the above

72. Which of these nutrients is the best source of energy?
   A. Carbohydrates
   B. Protein
   C. Vitamins
   D. Water

73. The vertebrae would be examples of what classification of bones?
   A. Flat bones
   B. Irregular bones
   C. Long Bones
   D. Short bones
74. Where is the primary site of fiber digestion in horses?
   A. Stomach
   B. Small Intestine
   C. Pancreas
   D. Large Intestine

75. Which of these is NOT a Volatile Fatty Acid (VFA)?
   A. Urea
   B. Acetate
   C. Propionate
   D. Butyrate

76. What breed of horse is primarily affected by the genetic lethal Combined Immunodeficiency Disease?
   A. Arabian
   B. Belgian
   C. Lusitano
   D. Paint horse

77. How many incisors does the adult horse have in the upper jaw?
   A. 3
   B. 4
   C. 5
   D. 6

78. What is the common term for laryngeal hemiplegia?
   A. Bronchitis
   B. Roaring
   C. Windsucking
   D. Heaves

79. At what age do the 1st premolars erupt?
   A. 1 month
   B. 6 months
   C. 1 years
   D. 3 years

80. Larking refers to unnecessarily jumping fences when participating in what equine activity?
   A. Foxhunting
   B. Hunter hack
   C. Hunter show
   D. Show jumping

81. The parotid gland is located where?
   A. Below the ear
   B. Between the jaws
   C. Underneath the tongue
   D. None of the above
82. How many teeth does a female horse have?
   A. 20 to 22
   B. 30 or 32
   C. **36 or 38**
   D. 40 or 42

83. The endocrine system uses __________ to effect target tissues.
   A. **Hormones**
   B. Blood
   C. Plasma
   D. Enzymes

84. What muscle is used by the horse for shaking off flies?
   A. **Panniculus**
   B. Paduncilis
   C. Pectineus
   D. None of the above

85. Which gland controls the pituitary?
   A. Pineal
   B. Thyroid
   C. Parathyroid
   D. **Hypothalamus**

86. What sex-linked disease results in a deficiency of clotting factor VIII (clotting factor 8)?
   A. Hemophilia
   B. SCID
   C. Lethal white
   D. None of the above

87. What is the target tissue of vasopressin?
   A. Thyroid Gland
   B. **Blood Vessels**
   C. Ovary
   D. Bone

88. What mineral is necessary for proper function of the thyroid gland?
   A. **Iodine**
   B. Iron
   C. Nitrogen
   D. Thiamine

89. Which hormone activates the “fight or flight mechanism?”
   A. **Epinephrine**
   B. Melatonin
   C. Vasopressin
   D. None of the above
90. The adrenal cortex is located near the ___________.
   A. Heart
   B. Brain
   C. Kidneys
   D. Testes

91. Which is NOT a major endocrine organ?
   A. Pancreas
   B. Testes
   C. Ovary
   D. None of the above

92. Movement of air into and out of the lungs is called?
   A. Circulation
   B. Respiration
   C. Aspiration
   D. None of the above

93. What is the normal breathing rate for horses at rest?
   A. 2 to 6 times per minute
   B. 8 to 16 times per minute
   C. 20 to 30 times per minute
   D. 40 to 60 times per minute

94. What prevents food from entering the larynx?
   A. Hard palate
   B. Dorsal meatus
   C. Trachea
   D. Epiglottis

95. What is another name for red blood cells?
   A. Albumin
   B. Erythrocytes
   C. Monocytes
   D. Thrombocytes

96. The amount of air inspired and expired during each breathing cycle is known as?
   A. Tidal Volume
   B. Vital Capacity
   C. Residual Volume
   D. Lung Capacity

97. What is the approximate blood volume of a horse?
   A. 2 to 4% of body weight
   B. 6 to 8% of body weight
   C. 12 to 14% of body weight
   D. 30 to 32% of body weight
98. What is the gait described as the fast, four beat lateral gait characteristic of Tennessee Walking Horses?
   A. Rack
   B. Slow Gait
   C. Running Walk
   D. Stepping Pace

99. What is the *minimum* recommended stocking rate for horses on pasture?
   A. 0.5 acre per horse
   B. 1 acre per horse
   C. **2 acres per horse**
   D. 4 acres per horse

100. What type of wood shavings are NOT recommended for horses?
    A. Black Walnut
    B. Wild Cherry
    C. Red Maple
    D. Black Locust
101. What is the average amount of manure produced by a horse per day?
   A. 5 to 10 lbs
   B. 10 to 15 lbs
   C. 20 to 30 lbs
   D. 40 to 50 lbs

102. What is the average seeding rate of cool season grasses?
   A. 1 to 2 lbs per acre
   B. 6 to 8 lbs per acre
   C. 20 to 22 lbs per acre
   D. 48 to 50 lbs per acre

103. What is the minimum height for perimeter fencing for horses (not including stallions)?
   A. 3 ft
   B. 4 ft
   C. 5 ft
   D. 6 ft

104. What is the most common width of boards used in constructing fences for horses?
   A. 3 to 4 inches
   B. 6 to 8 inches
   C. 9 to 11 inches
   D. 12 to 14 inches

105. How many strands of high tensile wire are recommended for horse fencing?
   A. 2 to 3
   B. 5 to 6
   C. 10 to 12
   D. 18 to 20

106. What is the minimum amount of space needed per horse for a run in shed?
   A. 25 ft
   B. 50 ft
   C. 75 ft
   D. 125 ft

107. In training horses, what type of stimulus is learned by practice?
   A. Conditioned
   B. Unconditioned
   C. Natural
   D. Responsive
108. Which of these is NOT a type of negative reinforcement?
   A. Punishment
   B. Escape
   C. **Reward**
   D. Avoidance

109. What type of behavior includes the giving of care and attention between mare and foal?
   A. Sexual
   B. **Epimeletic**
   C. Et-Epimeletic
   D. Allelomimetic

110. What is the term for the social or sexual response of a horse curling the upper lip with the head elevated in response to a smell?
   A. Fleshman Response
   B. **Flehmen Response**
   C. Peripheral Response
   D. Leydig Response

111. What is the most important characteristic in judging conformation?
   A. Quality
   B. **Balance**
   C. Height
   D. Muscling

112. Which of these is a conformation fault of the front legs?
   A. Camped Under
   B. Post legged
   C. Bowed tendon
   D. Bone Spavin

113. Which of these is NOT a conformation fault of the hind legs?
   A. Post legged
   B. Sickle-hocked
   C. Cow hocked
   D. **None of the above**

114. What undesirable movement is the result of a horse that is toed-out?
   A. Winging
   B. Paddling
   C. Surfing
   D. Forging

115. What is the term for cannon bones that are not centered in the knee, or offset, when viewed from the front?
   A. Calf-kneed
   B. Bandy legged
   C. Buck-kneed
   D. **Bench-kneed**
116. The calcification or bony growth that occurs on the inside of the cannon bone is commonly referred to as what?
   A. Spavin  
   B. Splint  
   C. Thoroughpin  
   D. Curb

117. Which of these is NOT an Appaloosa coat pattern?
   A. Blanket  
   B. Leopard  
   C. Few-spot  
   D. Overo

118. What is the term for a light blue iris resulting from lack of brown pigment?
   A. Wall-eye  
   B. Mottled-eye  
   C. Blind-eye  
   D. White-eye

119. What are the dark spots on a white coronet band called?
   A. Mottling  
   B. Distal spots  
   C. Caudal spots  
   D. None of the above

120. A red roan occurs with what color base coat?
   A. Black  
   B. Bay  
   C. Chestnut  
   D. Sorrel

121. Which is NOT a type of overo coat pattern?
   A. Medicine Hat  
   B. Frame  
   C. Sabino  
   D. Splashed white

122. The ____________ plane separates the horse into equal left and right parts.
   A. transverse  
   B. sagittal  
   C. median  
   D. dorsal

123. What is the abbreviation PHBA stand for?
   A. Paint Horse Breeders of America  
   B. Palomino Horse Breeders of America  
   C. Pinto Horse Breeders Association  
   D. Peruvian Horse Breeders Association
124. In modern cutting competitions, how long does the rider have to demonstrate their ability to cut the cattle from the herd?
   A. 60 seconds
   B. 1 minute and 30 seconds
   C. 2 minutes and 30 seconds
   D. 5 minutes and 30 seconds

125. In reining competition, each horse automatically begins with a score of ____?
   A. 0
   B. 60
   C. 70
   D. 100

126. Which if the following would result in elimination from an equitation over fences class?
   A. 2 faults
   B. 4 faults
   C. Second refusal
   D. Third refusal

127. Which of the following does not describe an animal in the order perissodactyla:
   A. odd toed
   B. non-ruminating
   C. hoofed
   D. even toed

128. A horse trailer should be at least ____ inches higher than the horse’s head at resting position.
   A. 2
   B. 4
   C. 6
   D. 10

129. What type of bit has a soft, apple flavored rubber mouthpiece?
   A. Sweet Mouth
   B. Happy Mouth
   C. German Mouth
   D. Apple Mouth

130. What type of equipment consists of a bosal noseband attached to the headstall and is sometimes used for training young horses?
   A. Jaquima
   B. Hackamore Bit
   C. Western Curb
   D. None of the above

131. Which discipline would NOT use a Weymouth bridle?
   A. Saddle Seat
   B. Dressage
   C. Hunters
   D. Reining
132. What type of competition consists of races from 50 to 100 miles?
   A. Marathon  
   **B. Endurance**  
   C. Cross Country  
   D. Combined Training

133. What is another term for western reins that are closed and connected with a flexible quirt sometimes called a “romal”?
   A. California reins  
   B. Texas reins  
   C. Vaquero reins  
   D. Oklahoma reins

134. What is the purpose of adding shanks to a mouthpiece?
   A. Direct pressure  
   **B. Leverage**  
   C. To prevent fidgeting  
   D. Evasion

135. What is the maximum height of ponies?
   A. 12.2 hands  
   B. 13.2 hands  
   **C. 14.2 hands**  
   D. 15.2 hands

136. A wooden device that placed around the neck to prevent horses from reaching their bandages is called a ___________?
   A. Neck Cradle  
   B. Neck Gaurd  
   C. Neck Strap  
   D. Neck Cone

137. When harvesting wet hay, what preservative can be applied to inhibit fermentation?
   A. Buteric acid  
   **B. Proprionic acid**  
   C. Acetic acid  
   D. Ascorbic acid

138. Symptoms of Wobbler’s Syndrome includes:
   A. Uncoordinated gait  
   B. Wide based stance  
   C. Spasticity  
   **D. All of the above**

139. Which muscles reduce the protrusion of the anus during defecation?
   A. Dorsal sacrocaudal muscles  
   B. Anal sphincter muscles  
   C. Coccygeus muscles  
   **D. Anal levator muscles**
140. Major contributors to developmental orthopedic disease in growing horses include?
   A. **Rapid growth, trauma to growth plate, poor nutrition**
   B. Rapid growth, poor nutrition, bone cysts
   C. Genetic predisposition, shoes, exercise
   D. Protein imbalance, exercise, trauma to growth plates

141. Which of the following amounts are important when preparing a mare’s milk substitute for an orphan foal?
   A. Low milk fat
   B. High lactose
   C. Volume of replacer
   D. **All of the above**

142. This product is the result of the breakdown of muscle creatine which is then excreted in the urine.
   A. Urea
   B. Amino acids
   C. **Creatinine**
   D. Nitrogen

143. A very typical symptom of this unsoundness is chronic, intermittent lameness.
   A. Abscess
   B. Quickening disease
   C. Green splint
   D. **Navicular disease**

144. What type of shoe is most commonly used on an acute laminitic horse?
   A. Rocker toe shoe
   B. Weighted shoe
   C. Toe clip shoe
   D. **Full support**

145. Which of these would cause shunting of the blood from dermal laminae?
   A. Circulation of endotoxins
   B. Hard concussion on the foot
   C. Grain overload
   D. **All of the above**

146. Which pesticide inhibits egg hatching and larval development?
   A. Fungicides
   B. Botanicals
   C. **Insect growth regulators**
   D. Insecticides
147. Which of the following is described by forehand moves around the haunches in a small circle with a radius equal to the length of the horse?
   A. Levade
   B. Pirouette
   C. Piaffe
   D. Passage

148. Which of the following is a formal four wheeled covered carriage with two facing seats and a seat outside for the coachman?
   A. Landau carriage
   B. Berlin carriage
   C. Phaeton carriage
   D. Whisky carriage

149. When selecting potential breeding mates which of the following is NOT an important factor in the mating:
   A. principle of genetics
   B. heritability
   C. relationships of potential mates
   D. variability among genes

150. The skeletal system of the horse functions as:
   A. levers, stores minerals, blood cell formation
   B. levers, protects organs, regulates sodium levels
   C. provides framework for muscles, protects organs, and filters fluid
   D. stores minerals and releases hormones for growth