

2017 NC State Hippology Contest Senior Written Exam (200 points = 2 pts/question)

Name _____ Contestant ID # _____

Directions: Please bubble your answers on the **BLUE** side of your scantron sheet **be sure to bubble in your contestant number in the student ID section.** Please circle your answers on this test and turn it in with your completed scantron. You can make other marks on this test if you wish.

1. This hormone peaks from the day of ovulation to 2 days after. It is responsible for final maturation of the follicle, induction of ovulation, and initiation of corpus luteum formation.
a. **Luteinizing hormone** c. Estrogen
b. Follicle stimulating hormone d. Gonadotropin releasing hormone
2. Any birth less than how many days is considered premature in horses?
a. 275 days c. **320 days**
b. 300 days d. 335 days
3. A mare that is bred should have a minimum body condition score of what?
a. 3 c. 7
b. 5 d. 9
4. What is the heart rate of a foal in the first days of life?
a. 10-12 beats per minute c. 50-66 beats per minute
b. 30-40 beats per minute **d. 70-100 beats per minute**
5. How long does it take for a foal's immune system to become functional and able to produce antibodies?
a. 1-2 weeks c. **2-4 months**
b. 3 weeks d. 6 months
6. A pregnant mare does not require any additional nutrients through the first how many months of pregnancy?
a. 5 months c. 7 months
b. 6 months **d. 8 months**
7. Microbes in the cecum and large intestine break down fibrous feedstuffs into what?
a. Essential amino acids c. Ascorbic acid
b. Volatile fatty acids d. Carbohydrates
8. 91-100% of Thoroughbred racehorses in training have what disorder?
a. Osselets c. **Ulcers**
b. Epistaxis d. Quarter cracks

9. What is the ideal moisture level at which hay should be baled?
- a. 1-2%
 - b. 5%
 - c. **17-20%**
 - d. 40-45%
10. Which of the following is a warm season grass that is suitable for both grazing and hay production?
- a. Tall fescue
 - b. Birdsfoot trefoil
 - c. Wheatgrass
 - d. **Bermudagrass**
11. Foxglove, oleander, and lily of the valley all contain toxins known as what?
- a. **Cardiac glycosides**
 - b. Tannins
 - c. Cantharadins
 - d. Dicumerols
12. What type of cinch is the crossback pack saddle usually rigged for?
- a. Single-cinch
 - b. **Double-cinch**
 - c. Triple-cinch
 - d. None of the above
13. Which of the following is an improper use of the word "trace?"
- a. **Clipping the horse's body except for the legs and the outline of the saddle area**
 - b. The lead horse when horses are driven in front of each other
 - c. The leather bands on a harness by which pressure is transferred to the vehicle
 - d. All are correct
14. What does black-type on a Thoroughbred sales catalog entry denote?
- a. The horse was imported
 - b. **The horse is stakes winner**
 - c. The horse is of age to run in the Kentucky Derby
 - d. The horse is a gelding
15. What disease is transmitted to horses by a bite from an infected carnivore such as a skunk, raccoon, fox, or dog? The infection is caused by a rhabdovirus.
- a. Distemper
 - b. Strangles
 - c. **Rabies**
 - d. Tetanus
16. What stallion do horses with hyperelastosis cutis, also known as hereditary equine regional dermal asthenia (HERDA), trace back to?
- a. **Poco Bueno**
 - b. Impressive
 - c. Zippo Pine Bar
 - d. A.P. Indy
17. Who was the foundation sire of the American Saddlebred?
- a. Janus
 - b. **Denmark**
 - c. Justin Morgan
 - d. Black Hand No. 1

18. Who was the first Thoroughbred imported to the United States?
- a. Steeldust
 - b. Byerley Turk
 - c. **Bulle Rock**
 - d. Impressive
19. This type of insurance protects the insured from occurrences in which the insured can be held liable for bodily injury or property damage.
- a. Care, custody, and control
 - b. **Liability**
 - c. Property
 - d. Worker's compensation
20. This is a tough membrane that covers the bones throughout the body except for at their points of articulation.
- a. Peritoneum
 - b. Pleura
 - c. **Periosteum**
 - d. Periople
21. What term would describe a horse produced by a mating of two completely unrelated lines?
- a. Inbreeding
 - b. Linebreeding
 - c. **Outcrossing**
 - d. Nicking
22. The forearm of the horse is composed of two bones, the _____ and _____.
- a. **Radius; ulna**
 - b. Humerus; ulna
 - c. Radius; olecranon
 - d. Radius; humerus
23. What is the name for a hinge joint?
- a. Diarthroses
 - b. **Ginglymus**
 - c. Enarthrosis
 - d. Synovial
24. What drug is used in the treatment of navicular disease in an attempt to increase circulation to the navicular bone?
- a. Digitalis
 - b. **Isoxsuprin**
 - c. Banamine
 - d. Phenylbutazone
25. What is the total range of vision for a horse?
- a. 180 degrees
 - b. 250 degrees
 - c. 280 degrees
 - d. **350 degrees**
26. What is the Flehmen response?
- a. Ability to see and sense danger from which it can run away
 - b. The process of a horse sensing fear from a person
 - c. **When a horse curls its upper lip and holds its head in the air**
 - d. What you are trying to prevent by desensitizing a horse

27. A dark-colored splotch on the basic coat color that is generally brown or red in color is known as what?
- a. Flea bit
 - b. Blood mark**
 - c. Ink spot
 - d. Dapple
28. Which of the following breeds is not affected by Hemophilia A?
- a. Thoroughbred
 - b. Arabian**
 - c. Standardbred
 - d. Quarter horse
29. Which is not an ideal energy producing nutrient?
- a. Starch
 - b. Sugar
 - c. Fat
 - d. Protein**
30. Which is true of essential amino acids?
- a. They cannot be synthesized by the body**
 - b. They can be synthesized by the body
 - c. They are not needed by the animal
 - d. They should not be added to the animal's diet
31. Which is not a macro-mineral?
- a. Calcium
 - b. Sodium
 - c. Zinc**
 - d. Chloride
32. Which of the modern horses was the first to have one toe?
- a. Pliohippus**
 - b. Equus
 - c. Merychippus
 - d. Mesohippus
33. A hinny is the offspring that results from the cross of a _____ and a _____.
- a. Stallion; jenny**
 - b. Stallion; mare
 - c. Jack; mare
 - d. Jack; jenny
34. What bones form the withers?
- a. Thoracic vertebrae and scapula**
 - b. Cervical vertebrae and scapula
 - c. Thoracic vertebrae and humerus
 - d. Cervical vertebrae and humerus
35. Which color dominance statement is correct?
- a. Bay is dominant over black**
 - b. Chestnut is dominant over bay
 - c. Black is dominant over gray
 - d. Brown is dominant over bay

36. Which is an internal parasite commonly found in adult horses?
- a. Pinworms
 - b. Large strongyles
 - c. **Bots**
 - d. Threadworms
37. Which feedstuff is most likely to be contaminated with the mycotoxin Fumonisin?
- a. **Corn**
 - b. Oats
 - c. Barley
 - d. Rye
38. What is stroke volume?
- a. **The amount of blood pumped by the ventricle**
 - b. The amount of blood pumped by the atrium
 - c. The amount of blood traveling through the body at any given time
 - d. The amount of blood a horse can lose without having a stroke
39. What is a complete feed?
- a. **Forage and concentrate in one feed**
 - b. Has all of the concentrates in one feed
 - c. Has all of the forage in one feed
 - d. Meets the complete requirements for all horses
40. Where is the primary site of nutrient absorption in the digestive tract?
- a. Stomach
 - b. **Small intestine**
 - c. Large intestine
 - d. Cecum
41. Which shoe would most likely be used on a horse with navicular disease?
- a. Heart bar
 - b. **Egg bar**
 - c. Patten
 - d. Hospital plate
42. A farrier tool used to cut off excess hoof growth is what?
- a. Rasp
 - b. Clinchers
 - c. **Nippers**
 - d. Clippers
43. What stimulates a mare to begin her estrous cycles?
- a. **Lengthening daylight**
 - b. Warmer temperatures
 - c. Exposure to a stallion
 - d. Shortening daylight
44. Which hormone induces parturition?
- a. Progesterone
 - b. Estrogen
 - c. Parturition hormone
 - d. **Oxytocin**

45. The sacrum is caudal to which of the following?
- a. **Olecranon**
 - b. Gaskin
 - c. Acetabulum
 - d. Calcaneus
46. The atlas and axis are located in which region of the spinal column?
- a. Sacral
 - b. Lumbar
 - c. **Cervical**
 - d. Thoracic
47. Horses that huddle together during inclement weather are displaying what type of behavior?
- a. **Contactual**
 - b. Epimeletic
 - c. Allelomimetic
 - d. Et-epimeletic
48. The chief movements of the shoulder joint are what?
- a. Adduction and abduction
 - b. Adduction and flexion
 - c. Abduction and extension
 - d. **Flexion and extension**
49. The horse, like rabbits and guinea pigs, are classified as which of the following?
- a. Ruminant herbivores
 - b. **Nonruminant herbivores**
 - c. Cecum-containing herbivores
 - d. Simple stomach omnivores
50. What is the difference between perlino and cremello horses?
- a. Perlino is off-white and cremello is pearly
 - b. Perlinos have lighter manes and tails
 - c. Cremellos are true albinos
 - d. **Perlinos have rust points**
51. Death caused by tetanus usually occurs by what means?
- a. **Asphyxiation**
 - b. Starvation
 - c. Poisoning
 - d. Paralysis
52. In reference to the brain, what are sulci?
- a. **Grooves**
 - b. Convolutions
 - c. Specialized cells
 - d. Optic nerves
53. HYPP is characterized as intermittent attacks of muscle weakness. What causes these muscle tremors, weakness, or convulsions?
- a. Prolonged periods of internal bleeding
 - b. **Postassium leaking out of the muscle cells**
 - c. Hemolysis
 - d. Degeneration of muscle cells

54. What is the scientific name of the bloodsucking stable fly?
- a. ***Stomoxys calcitrans***
 - b. *Gastrophilus intestinalis*
 - c. *Haematopinus asini*
 - d. *Bovicola equi*
55. Which of the following parasite larvae infests the lungs of foals?
- a. Large strongyles
 - b. Pinworms
 - c. Strongyloides
 - d. Bots
56. Which of the following diseases are caused by a virus that utilizes birds or rodents as reservoir hosts?
- a. **EEE**
 - b. EVA
 - c. EHV
 - d. EAV
57. Which of the following elements is not always present in amino acids?
- a. Nitrogen
 - b. Carbon
 - c. Oxygen
 - d. **Sulfur**
58. Polysaccharide-storage myopathy is one type of which genetic disorder?
- a. Neonatal isoerythrolysis
 - b. Hyperkalemic periodic paralysis
 - c. **Rhabdomyolysis**
 - d. Equine degenerative myeloencephalopathy
59. How many auditory ossicles are in each temporal bone?
- a. 2
 - b. **3**
 - c. 6
 - d. 8
60. The costal cartilage of the asternal ribs fuses to form what structure?
- a. Manubrium
 - b. **Costal arch**
 - c. Xiphoid process
 - d. Sternebrae
61. In male horses, what are the tubes that carry sperm from the epididymis to the urethra?
- a. Ampulla
 - b. **Vas deferens**
 - c. Seminiferous tubules
 - d. Ureters
62. Horses grazing _____ may suffer a _____ deficiency because of the ingestion of _____.
- a. Alfalfa, calcium, blister beetles
 - b. Bermudagrass, phosphorus, cyanide
 - c. **Sweet clover, vitamin K, dicoumerol**
 - d. Prairie grass, vitamin C, tannins
63. This hormone stimulates the sweating response in horses.
- a. **Epinephrine**
 - b. Insulin
 - c. Adrenocorticotrophic hormone
 - d. Cortisol

64. Which of the following is not a type of noseband designed to keep a horse's mouth shut?
- a. Cavesson
 - b. Dropped
 - c. Flash
 - d. **Bosal**
65. What two bones form the pelvic girdle?
- a. Ischium and axis
 - b. Ischium and femur
 - c. Ileum and coccyx
 - d. **Ischium and ileum**
66. For a feed to be considered a protein supplement, it needs to have at least how much protein in it?
- a. >50%
 - b. >30%
 - c. **>20%**
 - d. >15%
67. What is the chief form in which carbohydrates are stored in the body?
- a. Glucose
 - b. **Glycogen**
 - c. Lipid
 - d. Protein
68. What is the enzyme in the stomach that breaks down most proteins to polypeptides, aiding in digestion?
- a. Trypsin
 - b. Chymotrypsin
 - c. **Pepsin**
 - d. Amylase
69. Which of these hormones produces a strong luteolytic action and can be used to short-cycle a mare?
- a. Progesterone
 - b. Estrogen
 - c. **Prostaglandins**
 - d. GnRH
70. What term describes the death of cells or body tissue while the body is still alive?
- a. Nephrotic
 - b. Hyperostosis
 - c. Trophic
 - d. **Necrosis**
71. Leydig cells in the stallion produce testosterone in the presence of what hormone?
- a. **Luteinizing hormone**
 - b. Gonadotropin releasing hormone
 - c. Estrogen
 - d. Follicle stimulating hormone
72. How much would your 1,200 lb. horse consume if it was fed 2% of its body weight per day?
- a. 15 lbs.
 - b. 20 lbs.
 - c. **24 lbs.**
 - d. 32 lbs.

73. A desirable paddock or exercise area devoid of vegetation or edible plants is generally termed what?
- a. **Dry lot**
 - b. Pasture
 - c. Stall
 - d. Mud lot
74. Which hair coat is the result of a double dilution of chestnut?
- a. Dun
 - b. Palomino
 - c. **Cremello**
 - d. Roan
75. In thoroughbred racing terms, exercising a horse at a moderate pace (2 minute mile) is typically referred to as a what?
- a. **Breeze**
 - b. Sprint
 - c. Workout
 - d. Wind
76. Which term can be defined as relating to tissue changes that affect a body part or accompany a disease?
- a. Ophthalmological
 - b. **Histopathological**
 - c. Bacteriological
 - d. Dermatological
77. Which is responsible for lubricating the horse's joints?
- a. Interstitial fluid
 - b. Spinal fluid
 - c. **Synovial fluid**
 - d. Saline
78. What is the first excrement of newborn foals called?
- a. Amnion
 - b. **Meconium**
 - c. Periosteum
 - d. Peritoneum
79. Which disease is characterized by swollen or abscessed lymph nodes, particularly those under or behind the jaw?
- a. Influenza
 - b. Tetanus
 - c. **Strangles**
 - d. Encephalitis
80. What term describes a depression in a horse's shoulder due to atrophied muscles caused by a nerve injury?
- a. Stringhalt
 - b. Stifled
 - c. **Sweeney**
 - d. Hematoma

Match the following signs of parturition to their usual time of occurrence.

- | | |
|--|------------------------------|
| 81. Vulva becomes soft, loose, and relaxed (E) | A. 2-4 weeks before foaling |
| 82. Teats fill with a clear, watery secretion (C) | B. 1-3 weeks before foaling |
| 83. Relaxation evident on each side of the tailhead (B) | C. 4-7 days before foaling |
| 84. Secretions become cloudy and wax-like (D) | D. 1-4 days before foaling |
| 85. Distended udder (A) | E. ½-1 ½ days before foaling |

Match the B vitamin to its corresponding number.

- | | |
|---------------------------|----------------------------|
| 86. Riboflavin (B) | A. No corresponding number |
| 87. Niacin (A) | B. B ₂ |
| 88. Pyridoxine (E) | C. B ₁₂ |
| 89. Cobalamin (C) | D. B ₁ |
| 90. Thiamin (D) | E. B ₆ |

Match the feedstuff with its corresponding crude protein content.

- | | |
|-----------------------------|--------|
| 91. Soybean meal (B) | A. 9% |
| 92. Corn (E) | B. 44% |
| 93. Grass hay (A) | C. 12% |
| 94. Alfalfa hay (D) | D. 17% |
| 95. Oats (C) | E. 10% |

Match the plant to its effect on the horse.

- | | |
|---------------------------------|--------------------------|
| 96. Russian knapweed (B) | A. Teratogenic |
| 97. Black walnut (C) | B. Neurotoxic |
| 98. Oleander (E) | C. Lameness-inducing |
| 99. Red maple (D) | D. Anemia-inducing |
| 100. Tobacco (A) | E. Sudden death-inducing |