

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.

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

Match the B vitamin to its corresponding number.

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

Match the feedstuff with its corresponding crude protein content.

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

Match the plant to its effect on the horse.

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