

Write all your answers on this page. Write the letter of the correct answer in the space provided.

|      |      |      |       |
|------|------|------|-------|
| 1.B  | 26.C | 51.B | 76.A  |
| 2.D  | 27.C | 52.C | 77.A  |
| 3.C  | 28.B | 53.A | 78.D  |
| 4.B  | 29.B | 54.D | 79.B  |
| 5.D  | 30.C | 55.C | 80.A  |
| 6.A  | 31.B | 56.D | 81.B  |
| 7.D  | 32.D | 57.C | 82.A  |
| 8.B  | 33.C | 58.D | 83.C  |
| 9.C  | 34.A | 59.B | 84.A  |
| 10.A | 35.C | 60.B | 85.A  |
| 11.A | 36.D | 61.D | 86.C  |
| 12.C | 37.C | 62.B | 87.D  |
| 13.C | 38.D | 63.C | 88.C  |
| 14.A | 39.D | 64.A | 89.C  |
| 15.B | 40.A | 65.B | 90.D  |
| 16.C | 41.C | 66.C | 91.C  |
| 17.A | 42.A | 67.D | 92.B  |
| 18.D | 43.B | 68.D | 93.C  |
| 19.C | 44.C | 69.C | 94.C  |
| 20.A | 45.B | 70.D | 95.A  |
| 21.B | 46.C | 71.C | 96.D  |
| 22.A | 47.A | 72.C | 97.D  |
| 23.C | 48.D | 73.D | 98.B  |
| 24.B | 49.D | 74.A | 99.B  |
| 25.C | 50.C | 75.C | 100.C |

If you have time, when you are finished with the exam, draw us a picture on the BACK of this answer sheet.

Carefully read each of the following questions, and enter the correct answer on your answer sheet.  
Good luck on the exam.

1. Which of these identifies the Phylum to which the horse belongs?
  - A. Animalia
  - B. Chordata
  - C. Equidae
  - D. Perissodactyla
  
2. Which color is not recognized as a color of a registered Arabian horse?
  - A. bay
  - B. brown
  - C. chestnut
  - D. white
  
3. Which of these describes the paso, the natural gait of both the Paso Fino and the Peruvian Paso?
  - A. two-beat lateral gait
  - B. two-beat diagonal gait
  - C. four-beat lateral gait
  - D. four-beat diagonal gait
  
4. Which of these terms refers to a horse that is black with white spots?
  - A. overo
  - B. piebald
  - C. skewbald
  - D. tobiano
  
5. Which of these matings would be most likely to result in a palomino foal?
  - A. palomino by palomino
  - B. chestnut by palomino
  - C. palomino by cremello
  - D. chestnut by cremello
  
6. Which of these breeds did not originate in Germany?
  - A. Gotland
  - B. Hanoverian
  - C. Holstein
  - D. Trakehner
  
7. Which of these best describes a difference between a horse and an ass?
  - A. A horse has longer ears.
  - B. A horse has smaller hooves.
  - C. A horse has a sparser mane and tail.
  - D. A horse has a different number of chromosomes

8. What does the term PCV refer to in regards to blood?
  - A. Plasma coagulant variable
  - B. Packed cell value
  - C. Plasma cell value
  - D. Porfuria cell variable
9. What amino acid is necessary for growth and milk production?
  - A. Methionine
  - B. Argininine
  - C. Lysine
  - D. Tryptophan
10. Which of these systems is responsible for the chemical control of the body?
  - A. endocrine
  - B. integumentary
  - C. muscular
  - D. reproductive
11. Which of these connects bones to other bones?
  - A. ligaments
  - B. limbs
  - C. muscles
  - D. tendons
12. How many teeth does a mature female horse have?
  - A. 24
  - B. 30
  - C. 36
  - D. 42
13. Which of these regions of the spinal column has the fewest vertebrae?
  - A. cervical
  - B. coccygeal
  - C. sacral
  - D. thoracic
14. Which of these terms is also known as an offset knee?
  - A. bench-kneed
  - B. buck-kneed
  - C. calf-kneed
  - D. splint-kneed
15. Which of these best describes a blemish?
  - A. acquired and affects usefulness
  - B. acquired and does not affect usefulness
  - C. congenital and affects usefulness
  - D. congenital and does not affect usefulness

16. Which of these identifies a voluntary type of muscle?
  - A. cardiac
  - B. respiratory
  - C. skeletal
  - D. smooth
  
17. Plants contain a pigment called carotene. Which of these vitamins is created by the horse using carotene?
  - A. vitamin A
  - B. vitamin D
  - C. vitamin E
  - D. vitamin K
  
18. Which of these refers to an infection of the frog?
  - A. corns
  - B. founder
  - C. gravel
  - D. thrush
  
19. Which of these describes atrophy of the muscles of the shoulder?
  - A. carpalis
  - B. epiphysitis
  - C. sweeney
  - D. thoroughpin
  
20. Which of these terms refers to throwing the front feet outward while in flight?
  - A. paddling
  - B. pounding
  - C. winding
  - D. winging
  
21. Which of these vices is described as a habit of force-swallowing gulps of air?
  - A. bolting
  - B. cribbing
  - C. shying
  - D. weaving
  
22. Which part of the digestive tract has the largest capacity?
  - A. colon
  - B. esophagus
  - C. small intestine
  - D. stomach

23. Which of these would cause an increase in the water needs of a horse?  
A. a decrease in the activity of a horse  
B. a decrease in the total dry matter intake  
C. an increase in the environmental temperature  
D. an increase in the amount of fresh young grass
24. Which of these types of hay is classified as a legume?  
A. bluestem  
B. clover  
C. fescue  
D. timothy
25. What is the term for providing an area where a foal can eat without interference from the mare?  
A. gestation  
B. lactation  
C. creep feeding  
D. bottle feeding
26. What body condition score would most likely be given to a horse that is moderate to fleshy?  
A. 2  
B. 4  
C. 6  
D. 8
27. Which of these is a condition in which the lungs do not function efficiently?  
A. colic  
B. founder  
C. heaves  
D. thrush
28. Which of these is not a part of the mare's reproductive tract?  
A. cervix  
B. scrotum  
C. uterus  
D. vagina
29. Which of these is the length of a typical mare's estrous cycle?  
A. 12 to 15 days  
B. 21 to 23 days  
C. 335 to 340 days  
D. 350 to 354 days

30. Which of these terms refers to a mare that has never been bred?  
A. barren  
B. lactating  
C. maiden  
D. open
31. How many pairs of chromosomes does a pony have?  
A. 31  
B. 32  
C. 62  
D. 64
32. In which walk gait would you expect the horse to have the lowest head carriage?  
A. Working walk  
B. Collected walk  
C. Extended walk  
D. Free walk
33. Which is a macromineral?  
A. Zinc  
B. Selenium  
C. Calcium  
D. Magnesium
34. Which Vitamin is most likely to be toxic when overfed?  
A. Vitamin A  
B. Vitamin E  
C. Vitamin B  
D. Vitamin C
35. Which hay would be expected to have the highest protein content?  
A. Bermuda grass  
B. Oat hay  
C. Alfalfa  
D. Reed canary grass
36. Which hay should be avoided when feeding pregnant mares?  
A. Lespedeza  
B. Bluegrass  
C. Rye grass  
D. Fescue
37. What disease is caused by the bacteria *Clostridium perfringens*?  
A. Equine Infectious Anemia  
B. West Nile  
C. Enterotoxemia  
D. Tetanus

38. What term describes the site on the ovary where ovulation occurs?
- A. Ovulation spot
  - B. Ovulation divet
  - C. Ovulation fora
  - D. Ovulation fossa
39. Which is the longest stage in the estrous cycle?
- A. Metestrus
  - B. Proestrus
  - C. Estrus
  - D. Diestrus
40. What is the term used when a mare does not show behavioral estrus?
- A. Silent heat
  - B. Anestrus
  - C. Night heat
  - D. Occult heat
41. Which of the following criteria for semen evaluation evaluates the shape of the sperm cells?
- A. Concentration
  - B. Motility
  - C. Morphology
  - D. Volume
42. Which describes the Flehmen reflex?
- A. Upward extension of the neck and curling of the lip
  - B. Arching of the neck and snorting
  - C. Flicking of the tail and kicking out
  - D. Arching of the neck and striking
43. When is the optimal time to breed a mare?
- A. 2 days before ovulation
  - B. 6-12 hours before ovulation
  - C. 6-12 hours after ovulation
  - D. 2 days after ovulation
44. What term describes the failure of a mare to produce milk?
- A. Alopecia
  - B. Adjuvant
  - C. Agalactia
  - D. Aiken
45. Mare colostrum provides what, that is essential for survival?
- A. Antibiotics
  - B. Antibodies
  - C. Vaccines
  - D. Antigens

46. Which of the following breeding strategies creates the greatest increase in homozygosity?
- A. Random selection
  - B. Inbreeding
  - C. Linebreeding
  - D. Crossbreeding
47. Which genotype would result in an animal that gets progressively lighter as it ages?
- A. GG
  - B. gg
  - C. Rnrn
  - D. RnRn
48. Which genotype is lethal, and results in death of the embryo?
- A. GG
  - B. gg
  - C. Rnrn
  - D. RnRn
49. What type of horse is most likely to be affected by Lethal White Syndrome?
- A. Pinto
  - B. Paint
  - C. Tobiano
  - D. Overo
50. Which genetic disease is also known as equine spinal ataxia?
- A. EPM
  - B. Aniridia
  - C. Wobbles
  - D. Atresia coli
51. What percentage of the genes of its grandsire would a foal carry?
- A. 50%
  - B. 25%
  - C. 12.5%
  - D. None of the above
52. Which disease is detected using the Coggins test?
- A. Tetanus
  - B. Encephalitis
  - C. Equine infectious anemia
  - D. Equine protozoal myelitis



53. Which disease is caused by a bacteria found in the feces of horses, and can affect both horses and humans?
- A. Tetanus
  - B. Rabies
  - C. Swamp fever
  - D. Encephalitis
54. What is the common name for laryngeal hemiplegia?
- A. Coughing
  - B. Snorting
  - C. Blowing
  - D. Roaring
55. What condition results in a tightening of the muscles that makes it extremely difficult for the horse to move?
- A. Choke
  - B. Spasmodic atrophy
  - C. Tying up
  - D. Potomac Horse Fever
56. Which of the following may cause diarrhea?
- A. Lush pasture
  - B. Sudden change in feed
  - C. Salmonella
  - D. All of the above
57. Which disease is caused by *Streptococcus equi*?
- A. Tetanus
  - B. Anthrax
  - C. Strangles
  - D. Influenza
58. For which disease do we vaccinate mares several times during pregnancy?
- A. Influenza
  - B. Viral arteritis
  - C. Pneumonia
  - D. Rhinopneumonitis
59. What is an ectoparasite?
- A. A parasite that lives in the body
  - B. A parasite that lives outside the body
  - C. Parasites that cause damage
  - D. Parasites that are transmissible to humans

60. What is the scientific name for the bot genus?
- A. Trichostrongylus
  - B. Gasterophilus
  - C. Cylicocercus
  - D. Ecdysus
61. What organ is preferred by the adult *Strongylus* species?
- A. Stomach
  - B. Lungs
  - C. Small intestine
  - D. Large intestine
62. Which term is used to describe a medication used to eliminate parasites?
- A. Vaccine
  - B. Anthelmintic
  - C. Antibody
  - D. Antibiotic
63. Which parasite might cause tail rubbing?
- A. Ascarids
  - B. Strongyles
  - C. Pinworms
  - D. Bots
64. A stimuli that can naturally elicit a response, with no prior training, is:
- A. Unconditioned stimuli
  - B. Conditioned stimuli
  - C. Natural stimuli
  - D. Learned stimuli
65. Most cues that are used in training horses are:
- A. Unconditioned stimuli
  - B. Conditioned stimuli
  - C. Natural stimuli
  - D. Learned stimuli
66. Which of the following is a primary reinforcer of behavior?
- A. Pat on the neck
  - B. Kind words 'good boy'
  - C. Feed
  - D. Spur
67. Which is a natural aid when training?
- A. Bit
  - B. Spur
  - C. Whip
  - D. Voice

68. At what stage of training would intermittent reinforcement be used?
- A. Teaching something new
  - B. When overcoming a fear
  - C. When eliminating a learned behavior
  - D. When maintaining a learned behavior
69. Which signals would you expect from the dominant horse in a herd?
- A. Lowered head and gumming
  - B. Tail between legs
  - C. Ears pinned back
  - D. Rounded shoulders
70. The navicular bone is also known as:
- A. Pedal bone
  - B. Coffin bone
  - C. Proximal sesamoid
  - D. Distal sesamoid
71. The tibia and fibula combine to form what external part?
- A. Stifle
  - B. Forearm
  - C. Gaskin
  - D. Hip
72. Laminitis primarily affects what bone?
- A. 1<sup>st</sup> phalanx
  - B. 2<sup>nd</sup> phalanx
  - C. 3<sup>rd</sup> phalanx
  - D. 4<sup>th</sup> phalanx
73. Which term most correctly describes the bone of the elbow?
- A. Radius
  - B. Ulna
  - C. Tarsus
  - D. Olecranon
74. How many bones are in the carpal joint?
- A. 7-8
  - B. 5-6
  - C. 3-4
  - D. 1-2
75. The cannon bone is also known as:
- A. 1<sup>st</sup> metacarpal
  - B. 2<sup>nd</sup> metacarpal
  - C. 3<sup>rd</sup> metacarpal
  - D. 4<sup>th</sup> metacarpal

76. Which tendon runs over the distal sesamoid?  
A. Deep flexor tendon  
B. Extensor tendon  
C. Superficial sesamoidean tendon  
D. Superficial flexor tendon
77. Muscles that work together to provide movement are:  
A. Synergistic  
B. Antagonistic  
C. Agonistic  
D. Sympathetic
78. What is the largest nerve in the horse's body.  
A. Tibial nerve  
B. Lumbosacral nerve  
C. Dorsal nerve  
D. Sciatic nerve
79. What tool is used to remove dead sole from the hoof?  
A. Hoof pick  
B. Hoof knife  
C. Nippers  
D. Shears
80. What heavy metal tool is used as a foundation for shaping shoes?  
A. Anvil  
B. Bellows  
C. Rasp  
D. Clinchers
81. What is the purpose of heel and toe clips on shoes?  
A. Add weight  
B. Hold the shoe in place  
C. Increase traction  
D. Correction of leg faults
82. For what unsoundness might the heart-bar shoe be used therapeutically?  
A. Laminitis  
B. Navicular disease  
C. Quarter crack  
D. Seedy toe
83. Which does not provide natural ventilation in a barn?  
A. Window  
B. Soffit  
C. Fan  
D. Ridge vent

84. Why should hay be stored in a separate building from horses?  
A. Fire risk  
B. Decreases ventilation  
C. Increases dust in barn  
D. All of the above
85. Which term describes inflammation of the ear?  
A. Otitis  
B. Auritis  
C. Gingivitis  
D. Laminitis
86. What term is used to describe a horse with a convex profile?  
A. Dished face  
B. Jibbah  
C. Roman nosed  
D. Hammerhead
87. Which part of the eye transmits an image to the optic nerve and lines the back surface of the eye's interior?  
A. cornea  
B. iris  
C. lens  
D. retina
88. Which organ is referred to with the use of the term renal?  
A. brain  
B. heart  
C. kidney  
D. lung
89. Which of these is produced by mating a mare with a jack?  
A. a donkey  
B. a jack  
C. a mule  
D. a zebra
90. Which of these results in a bony enlargement at the place where the base of the hock tapers into the cannon bone?  
A. blind spavin  
B. blood spavin  
C. bog spavin  
D. bone spavin
91. Which of these fills the cavities of bones?  
A. bile  
B. blood  
C. marrow  
D. melanin

92. Which of these is the NCHA dedicated to?  
A. chasing horses  
B. cutting horses  
C. camping and horses  
D. cattle and horses
93. Which digit does the modern horse walk on?  
A. first          B. second          C. third          D. fourth
94. Which of these is referred to as the near side of the horse?  
A. the back of the horse  
B. the front of the horse  
C. the left side of the horse  
D. the right side of the horse
95. Which of these describes the term proximal?  
A. toward the attached end of a limb  
B. away from the attached end of a limb  
C. toward the front end of the animal  
D. away from the front end of the animal
96. Which of these is a bone-producing membrane covering the bone?  
A. cartilage  
B. endosteum  
C. marrow  
D. periosteum
97. Which of these is the body's largest organ?  
A. brain          B. heart          C. lung          D. skin
98. How many bones are in the skull?  
A. 20          B. 34          C. 114          D. 205
99. Which type of bone are vertebrae?  
A. flat  
B. irregular  
C. long  
D. short
100. Which type of joint is immovable?  
A. cartilaginous  
B. ellipsoid  
C. fibrous  
D. synovial

THE END.  
Congratulations on completing the exam.