Eastern National Hippology Contest
Written Test
Exam I

Carefully read each of the following questions, and enter the correct answer on your scantron sheet. Do not mark on this page. Make sure you are using the space for Exam I for this set of questions. Please completely fill in the space of your preferred answer. The management committee will not hand score questions that the scantron cannot read. 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 breed requires that a horse be reasonably shown to be authentic and be inspected prior to being registered?
   A. Spanish-Barb
   B. Spanish Mustang
   C. American Indian Horse
   D. American Bashkir Curly
7. Which of these identifies the maximum height of a miniature horse?
   A. 32 inches
   B. 38 inches
   C. 44 inches
   D. 56 inches

8. Which of these breeds did not originate in Germany?
   A. Gotland
   B. Hanoverian
   C. Holstein
   D. Trakehner

9. 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 shorter gestation period.

10. 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

11. What amino acid is necessary for growth and milk production?
    A. Methionine
    B. Arginine
    C. Lysine
    D. Tryptophan

12. Which of these systems is responsible for the chemical control of the body?
    A. endocrine
    B. integumentary
    C. muscular
    D. reproductive

13. Which of these connects bones to other bones?
    A. ligaments
    B. limbs
    C. muscles
    D. tendons

14. How many teeth does a mature female horse have?
    A. 24
    B. 30
    C. 36
    D. 42
15. Which of these regions of the spinal column has the fewest vertebrae?
   A. cervical
   B. coccygeal
   C. sacral
   D. thoracic

16. Which of these terms is also known as an offset knee?
   A. bench-kneed
   B. buck-kneed
   C. calf-kneed
   D. splint-kneed

17. 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

18. Which of these identifies a voluntary type of muscle?
   A. cardiac
   B. respiratory
   C. skeletal
   D. smooth

19. 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

20. Which of these refers to an infection of the frog?
   A. corns
   B. founder
   C. gravel
   D. thrush

21. Which of these describes atrophy of the muscles of the shoulder?
   A. carpitis
   B. epiphysitis
   C. sweeney
   D. thoroughpins

22. Which of these terms refers to throwing the front feet outward while in flight?
   A. paddling
   B. pounding
   C. winding
   D. winging
23. Which of these vices is described as a habit of force-swallowing gulps of air?  
   A. bolting  
   B. cribbing  
   C. shying  
   D. weaving

24. Which part of the digestive tract has the largest capacity?  
   A. colon  
   B. esophagus  
   C. small intestine  
   D. stomach

25. 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

26. Which of these types of hay is classified as a legume?  
   A. bluestem  
   B. clover  
   C. fescue  
   D. timothy

27. 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

28. 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

29. Which of these is a condition in which the lungs do not function efficiently?  
   A. colic  
   B. founder  
   C. heaves  
   D. thrush

30. Which of these is not a part of the mare’s reproductive tract?  
   A. cervix  
   B. scrotum  
   C. uterus
31. 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

32. Which of these terms refers to a mare that has never been bred?
   A. barren  
   B. lactating  
   C. maiden  
   D. open

33. Which of these happens at the end of the first stage of parturition?
   A. the cervix dilates  
   B. the foal is expelled  
   C. the first water bag breaks  
   D. the mare walks the stall anxiously

34. How many pairs of chromosomes does a pony have?
   A. 31  
   B. 32  
   C. 62  
   D. 64

35. 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

36. Which is a macromineral?
   A. Zinc  
   B. Selenium  
   C. Calcium  
   D. Magnesium

37. Which Vitamin is most likely to be toxic when overfed?
   A. Vitamin A  
   B. Vitamin E  
   C. Vitamin B  
   D. Vitamin C
38. Which hay would be expected to have the highest protein content?
   A. Bermuda grass
   B. Oat hay
   C. **Alfalfa**
   D. Reed canary grass

39. Which hay should be avoided when feeding pregnant mares?
   A. Lespedeza
   B. Bluegrass
   C. Rye grass
   D. **Fescue**

40. What disease is caused by the bacteria *Clostridium perfringens*?
   A. Equine Infectious Anemia
   B. West Nile
   C. **Enterotoxemia**
   D. Tetanus

41. What term describes the site on the ovary where ovulation occurs?
   A. Ovulation spot
   B. Ovulation divet
   C. Ovulation fora
   D. **Ovulation fossa**

42. Which is the longest stage in the estrous cycle?
   A. Metestrus
   B. Proestrus
   C. Estrus
   D. **Diestrus**

43. What is the term used when a mare does not show behavioral estrus?
   A. Silent heat
   B. Anestrus
   C. Night heat
   D. Occult heat

44. Which of the following criteria for semen evaluation evaluates the shape of the sperm cells?
   A. Concentration
   B. Motility
   C. **Morphology**
   D. Volume

45. 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
46. 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

47. What term describes the failure of a mare to produce milk?
A. Alopecia
B. Adjuvant
C. Agalactia
D. Aiken

48. Mare colostrum provides what, that is essential for survival?
A. Antibiotics
B. Antibodies
C. Vaccines
D. Antigens

49. Which of the following breeding strategies creates the greatest increase in homozygosity?
A. Random selection
B. Inbreeding
C. Linebreeding
D. Crossbreeding

50. Which genotype would result in an animal that got progressively lighter as it aged?
A. GG
B. gg
C. RnRn
D. RnRn

51. Which genotype is lethal, and results in death of the embryo?
A. GG
B. gg
C. RnRn
D. RnRn

52. What type of horse is most likely to be affected by Lethal White Syndrome?
A. Pinto
B. Paint
C. Tobiano
D. Overo
53. Which genetic disease is also known as equine spinal ataxia?
A. EPM
B. Aniridia
C. **Wobbles**
D. Atresia coli

54. What percentage of the genes of it’s grandsire would a foal carry?
A. 50%
B. **25%**
C. 12.5%
D. None of the above

55. Which is a calculation of how highly related horses are?
A. Additive affect
B. Linebreeding estimate
C. Estimated breeding value
D. **Inbreeding coefficient**

56. Which disease is detected using the Coggins test?
A. Tetanus
B. Encephalitis
C. **Equine infectious anemia**
D. Equine protozoal myelitis

57. 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

58. What is the common name for laryngeal hemiplegia?
A. Coughing
B. Snorting
C. Blowing
D. **Roaring**

59. 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
60. Which of the following may cause diarrhea?
   A. Lush pasture
   B. Sudden change in feed
   C. Salmonella
   D. All of the above

61. Which disease is caused by *Streptococcus equi*?
   A. Tetanus
   B. Anthrax
   C. Strangles
   D. Influenza

62. For which disease do we vaccinate mares several times during pregnancy?
   A. Influenza
   B. Viral arteritis
   C. Pneumonia
   D. Rhinopneumonitis

63. 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

64. Which is a bot?
   A. Trichostrongylus
   B. Gasterophilus
   C. Cylicocerus
   D. Ecdyscus

65. What organ is preferred by the adult *Strongylus* species?
   A. Stomach
   B. Lungs
   C. Small intestine
   D. Large intestine

66. Which term is used to describe a medication used to eliminate parasites?
   A. Vaccine
   B. Anthelmintic
   C. Antibody
   D. Antibiotic

67. Which parasite might cause tail rubbing?
   A. Ascarids
   B. Strongyles
   C. Pinworms
   D. Bots
68. 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

69. Most cues that are used in training horses are:
   A. Unconditioned stimuli
   B. Conditioned stimuli
   C. Natural stimuli
   D. Learned stimuli

70. Which of the following is a primary reinforcer of behavior?
   A. Pat on the neck
   B. Kind words ‘good boy’
   C. Feed
   D. Spur

71. Which is a natural aid when training?
   A. Bit
   B. Spur
   C. Whip
   D. Voice

72. What is the result of using non-contingent punishment in horse training?
   A. Cessation of undesired behavior
   B. Maximizing athletic potential
   C. Creating general fear
   D. None of the above

73. 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

74. Reinforcing increments of a behavior as it moves toward the goal is known as:
   A. Successive approximation
   B. Positive reinforcement
   C. Incremental reinforcement
   D. ‘tuning up’ a horse

75. Which signals would you expect in the dominant horse in a herd?
   A. Lowered head and gumming
   B. Tail between legs
   C. Ears pinned back
   D. Rounded shoulders
76. The navicular bone is also known as:
A. Pedal bone  
B. Coffin bone  
C. Proximal sesamoid  
D. Distal sesamoid

77. The tibia and fibula combine to form what external part?
A. Stifle  
B. Forearm  
C. Gaskin  
D. Hip

78. Laminitis primarily affects what bone?
A. 1st phalanx  
B. 2nd phalanx  
C. 3rd phalanx  
D. 4th phalanx

79. Which term most correctly describes the bone of the elbow?
A. Radius  
B. Ulna  
C. Tarsus  
D. Olecranon
80. How many bones are in the carpal joint?
   A. 7-8
   B. 5-6
   C. 3-4
   D. 1-2

81. The cannon bone is also be known as:
   A. 1st metacarpal
   B. 2nd metacarpal
   C. 3rd metacarpal
   D. 4th metacarpal

82. Which tendon runs over the distal sesamoid?
   A. Deep flexor tendon
   B. Extensor tendon
   C. Superficial sesamoidean tendon
   D. Superficial flexor tendon

83. Which is an example of enarthrosis?
   A. Elbow joint
   B. Hock joint
   C. Atlas-Atlanto joint
   D. Hip joint

84. Muscles that work together to provide movement are:
   A. Synergistic
   B. Antagonistic
   C. Agonistic
   D. Sympathetic

85. What is the largest nerve in the horse’s body.
   A. Tibial nerve
   B. Lumbosacral nerve
   C. Dorsal nerve
   D. Sciatic nerve

86. What tool is used to remove dead sole from the hoof?
   A. Hoof pick
   B. Hoof knife
   C. Nippers
   D. Shears

87. What heavy metal tool is used as a foundation for shaping shoes?
   A. Anvil
   B. Bellows
   C. Rasp
   D. Clinchers
88. 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

89. For what unsoundness might the heart-bar shoe be used therapeutically?
   A. Laminitis
   B. Navicular disease
   C. Quarter crack
   D. Seedy toe

90. What is the minimum recommended depth for a run-in shed?
    A. 20 feet
    B. 30 feet
    C. 40 feet
    D. 50 feet

91. Which does not provide natural ventilation?
    A. Window
    B. Soffett
    C. Fan
    D. Ridge vent

92. 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

93. What does ‘get’ refer to, in the context of horses?
    A. Offspring of sire
    B. Offspring of dam
    C. Total foals in a given year
    D. Total foals with the same sire and dam

94. Which is an example of a rider using lateral aids?
    A. Right hand, left leg
    B. Right hand, right leg
    C. Left hand, left leg
    D. Left and right hand, left leg
95. Which term describes inflammation of the ear?
   A. Otitis
   B. Auritis
   C. Gingivitis
   D. Laminitis

96. What term is used to describe a horse with a convex profile?
   A. Dished face
   B. Jibbah
   C. Roman nosed
   D. Hammerhead

97. 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

98. Which part of the horse is located closest to the back?
   A. croup
   B. loin
   C. pastern
   D. stifle

99. Which organ is referred to with the use of the term renal?
   A. brain
   B. heart
   C. kidney
   D. lung

100. Which of these is the minimum age of a horse to be included in the Older Horse Registry?
    A. 10 years
    B. 15 years
    C. 20 years
    D. 25 years

THE END.
Congratulations on finishing Exam I move on to Exam II. Please change to the Exam II portion of the scantron.
2007 National Hippology Contest
Written Test
Exam II

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1. Which of these is produced by mating a mare with a jack?
   A. a donkey
   B. a jack
   C. a mule
   D. a zebra

2. 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

3. Which of these fills the cavities of bones?
   A. bile
   B. blood
   C. marrow
   D. melanin

4. Which of these is the NCHA dedicated to?
   A. chasing horses
   B. cutting horses
   C. camping and horses
   D. cattle and horses

5. Which digit does the modern horse walk on?
   A. first
   B. second
   C. third
   D. fourth

6. Which of these is not a part of the manus?
   A. carpus
   B. hoof
   C. pastern
   D. tarsus

7. 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
8. 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

9. Which of these is parallel to the median plane?
   A. dorsal plane
   B. lateral plane
   C. sagittal plane
   D. transverse plane

10. Which of these is a bone-producing membrane covering the bone?
    A. cartilage
    B. endosteum
    C. marrow
    D. periosteum

11. Which of these is the body’s largest organ?
    A. brain
    B. heart
    C. lung
    D. skin

12. Which of these shows the correct order of the first three stages of the hair cycle?
    A. anagen, catagen, telogen
    B. catagen, telogen, anagen
    C. catagen, anagen, telogen
    D. telogen, anagen, catagen

13. How many bones are in the skull?
    A. 20
    B. 34
    C. 114
    D. 205

14. Which type of bone are vertebrae?
    A. flat
    B. irregular
    C. long
    D. short

15. Which type of joint is immovable?
    A. cartilaginous
    B. ellipsoid
    C. fibrous
16. Which of these muscles is closest to the poll?
   A. brachiocephalic
   B. deltoid
   C. semitendinosus
   D. subclavian

17. Which of these describes a movement toward the median plane?
   A. abduction
   B. adduction
   C. extension
   D. rotation

18. Which of these describes a difference between veins and arteries?
   A. Veins contain less blood than arteries.
   B. Veins have thinner walls than arteries.
   C. Arteries usually have valves, while veins do not.
   D. Arteries direct blood toward the heart, while veins do not.

19. Which bone is not a part of the thigh and leg?
   A. femur
   B. patella
   C. scapula
   D. tibia

20. Which of these describes the conformation of a horse with a plaiting gait?
   A. base-wide and toe-in
   B. base-wide and toe-out
   C. base-narrow and toe-in
   D. base-narrow and toe-out

21. Which of these defects would most likely lead to curb?
   A. cow-hocked
   B. sickle hocks
   C. too straight behind
   D. short upright pasterns

22. Which of these is not classified as an equid?
   A. cattle
   B. donkeys
   C. horses
   D. zebras

23. Which of these is usually extracted as it may interfere with the bit?
   A. a canine tooth
   B. a deciduous tooth
   C. a premolar tooth
24. Which of these is a chamber common to both the digestive and respiratory tracts?
   A. heart
   B. lung
   C. pharynx
   D. stomach

25. What is the average length of the small intestine?
   A. 25 feet
   B. 45 feet
   C. 60 feet
   D. 70 feet

26. The shape and slope of the land is also known as:
   A. Zoning
   B. Topography
   C. Geography
   D. Morphology

27. What is the most important step in developing a facilities plan?
   A. Setting the budget
   B. Determining zoning regulations
   C. Getting a loan
   D. Establishing the goals of the operation

28. What is the minimum recommended height for horse fence?
   A. 5 feet
   B. 4 feet
   C. 6 feet
   D. 8 feet

29. Which type of fence is least desirable for horse fence?
   A. Board fence
   B. PVC fence
   C. Barbed wire fence
   D. Twisted wire fence

30. Which fence might contribute to colic in horses?
   A. Pipe and cable
   B. Chain link
   C. Board
   D. Rubber

31. What percent slope is needed to maximize drainage away from a run-in shed?
   A. 1%
   B. 2%
   C. 10%
32. Which disease most recently became an issue in the horse industry?
   A. Equine Infectious Anemia
   B. Eastern Equine Encephalitis
   C. Western Equine Encephalitis
   D. West Nile Virus

33. Which disease is caused by a protozoa?
   A. EPM
   B. EIA
   C. EEE
   D. WEE

34. What term best describes the horse’s digestive system?
   A. Non ruminant
   B. Ruminant
   C. Non-ruminant herbivore
   D. Ruminant herbivore

35. What is the advantage to the horse of splenic dumping when exercising?
   A. Increases energy to muscles
   B. Increases red blood cells to carry oxygen
   C. Increases respiration rate
   D. Increases speed of muscle contraction

36. Which of these types of wood should not be used as bedding for horses?
   A. Oak
   B. Pine
   C. Red Maple
   D. Black Walnut

37. Which of these identifies a plant that causes anemia due to red blood cell destruction?
   A. Asters
   B. Onions
   C. Sweet Clover
   D. Johnson Grass

38. Which of these is not a type of horseshoe nail head?
   A. City
   B. Frosthead
   C. Medium
   D. Regular

39. Which of these identified a general management guideline that should be followed?
   A. Feed only when the horses seem hungry.
B. Feed by volume rather than weight of feed.
C. Make changes to the horse's diet all at once.
D. Make sure water is available except when the horse is hot.

40. What muscle fibers are also known as 'slow twitch' fibers?
   A. Type I
   B. Type IIA
   C. Type IIB
   D. Type III

41. What type of cells secretes progesterone?
   A. Ovarian
   B. Luteal
   C. Uterine
   D. Kidney

42. The primary environmental cue regulating hair growth, and reproductive seasonality is:
   A. Humidity
   B. Temperature
   C. Barometric pressure
   D. Light

43. What hormone is used to ‘short cycle’ a mare?
   A. Progesterone
   B. Estrogen
   C. Luteinizing hormone
   D. Prostaglandin

44. What breed is most likely to be affected by Hyperkalemic Periodic Paralysis?
   A. Quarter Horse
   B. Arabian
   C. Thoroughbred
   D. Shetland

45. How often does a horse operation need to show a profit to meet the IRS “presumption of an activity as a business”?
   A. Every year
   B. 1 of 5
   C. 2 of 7
   D. 3 of 7

46. Which stage of life has the highest energy need?
   A. Mature maintenance
   B. First half of pregnancy
   C. Second half of pregnancy
   D. Early lactation
47. What would you do to diagnose failure of passive transfer in a foal?
   A. Test colostrums
   B. Test foal’s titer
   C. Test for immunoglobulin G
   D. Test for immunoglobulin M

48. Where does a horse have binocular vision?
   A. Directly in front
   B. To the left side
   C. To the right side
   D. Directly behind

49. Which is not a form of negative reinforcement?
   A. Punishment
   B. Flooding
   C. Escape
   D. Avoidance

50. What is the large muscle in the jaw that raises the jaw for chewing?
   A. Mandible
   B. Maxilla
   C. Manattah
   D. Massetter

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   B. lateral plane
   C. sagittal plane
   D. transverse plane

10. Which of these is a bone-producing membrane covering the bone?
    A. cartilage
    B. endosteum
    C. marrow
    D. periosteum

11. Which of these is the body’s largest organ?
    A. brain
    B. heart
    C. lung
    D. skin

12. Which of these shows the correct order of the first three stages of the hair cycle?
    A. anagen, catagen, telogen
    B. catagen, telogen, anagen
    C. catagen, anagen, telogen
    D. telogen, anagen, catagen

13. How many bones are in the skull?
    A. 20
    B. 34
    C. 114
    D. 205

14. Which type of bone are vertebrae?
    A. flat
    B. irregular
    C. long
    D. short
15. Which type of joint is immovable?
   A. cartilaginous
   B. ellipsoid
   C. fibrous
   D. synovial

16. Which of these muscles is closest to the poll?
   A. brachiocephalic
   B. deltoid
   C. semitendinous
   D. subclavian

17. Which of these describes a movement toward the median plane?
   A. abduction
   B. adduction
   C. extension
   D. rotation

18. Which of these describes a difference between veins and arteries?
   A. Veins contain less blood than arteries.
   B. **Veins have thinner walls than arteries.**
   C. Arteries usually have valves, while veins do not.
   D. Arteries direct blood toward the heart, while veins do not.

19. Which bone is **not** a part of the thigh and leg?
   A. femur
   B. patella
   C. **scapula**
   D. tibia

20. Which of these describes the conformation of a horse with a plaiting gait?
   A. base-wide and toe-in
   B. base-wide and toe-out
   C. base-narrow and toe-in
   D. **base-narrow and toe-out**

21. Which of these defects would most likely lead to curb?
   A. cow-hocked
   B. **sickle hocks**
   C. too straight behind
   D. short upright pasterns
22. Which of these is **not** classified as an equid?
   A. cattle  
   B. donkeys  
   C. horses  
   D. zebras

23. Which of these is usually extracted as it may interfere with the bit?
   A. a canine tooth  
   B. a deciduous tooth  
   C. a premolar tooth  
   D. a **wolf** tooth

24. Which of these is a chamber common to both the digestive and respiratory tracts?
   A. heart  
   B. lung  
   C. **pharynx**  
   D. stomach

25. What is the average length of the small intestine?
   A. 25 feet  
   B. 45 feet  
   C. 60 feet  
   D. **70 feet**

26. The shape and slope of the land is also known as:
   A. Zoning  
   B. **Topography**  
   C. Geography  
   D. Morphology

27. What is the most important step in developing a facilities plan?
   A. Setting the budget  
   B. Determining zoning regulations  
   C. Getting a loan  
   D. **Establishing the goals of the operation**

28. What is the minimum recommended height for horse fence?
   A. **5 feet**  
   B. 4 feet  
   C. 6 feet  
   D. 8 feet

29. Which type of fence is **least** desirable for horse fence?
   A. Board fence  
   B. PVC fence  
   C. **Barbed wire fence**  
   D. Twisted wire fence
30. Which fence might contribute to colic in horses?
   A. Pipe and cable
   B. Chain link
   C. Board
   D. Rubber

31. What percent slope is needed to maximize drainage away from a run-in shed?
   A. 1%
   B. 2%
   C. 10%
   D. 12%

32. Which disease most recently became an issue in the horse industry?
   A. Equine Infectious Anemia
   B. Eastern Equine Encephalitis
   C. Western Equine Encephalitis
   D. West Nile Virus

33. Which disease is caused by a protozoan?
   A. EPM
   B. EIA
   C. EEE
   D. WEE

34. What term best describes the horse’s digestive system?
   A. Non ruminant
   B. Ruminant
   C. Non-ruminant herbivore
   D. Ruminant herbivore

35. What is the advantage to the horse of splenic dumping when exercising?
   A. Increases energy to muscles
   B. Increases red blood cells to carry oxygen
   C. Increases respiration rate
   D. Increases speed of muscle contraction

36. Which of these types of wood should not be used as bedding for horses?
   A. Oak
   B. Pine
   C. Red Maple
   D. Black Walnut

37. Which of these identifies a plant that causes anemia due to red blood cell destruction?
   A. Asters
   B. Onions
   C. Sweet Clover
   D. Johnson Grass
38. Which of these is not a type of horseshoe nail head?
   A. City
   B. Frosthead
   C. Medium
   D. Regular

39. Which of these identified a general management guideline that should be followed?
   A. Feed only when the horses seem hungry.
   B. Feed by volume rather than weight of feed.
   C. Make changes to the horse's diet all at once.
   D. Make sure water is available except when the horse is hot.

40. What muscle fibers are also known as ‘slow twitch’ fibers?
   A. Type I
   B. Type IIA
   C. Type IIB
   D. Type III

41. What type of cells secretes progesterone?
   A. Ovarian
   B. Luteal
   C. Uterine
   D. Kidney

42. The primary environmental cue regulating hair growth, and reproductive seasonality is:
   A. Humidity
   B. Temperature
   C. Barometric pressure
   D. Light

43. What hormone is used to ‘short cycle’ a mare?
   A. Progesterone
   B. Estrogen
   C. Luteinizing hormone
   D. Prostaglandin

44. What breed is most likely to be affected by Hyperkalemic Periodic Paralysis?
   A. Quarter Horse
   B. Arabian
   C. Thoroughbred
   D. Shetland

45. How often does a horse operation need to show a profit to meet the IRS “presumption of an activity as a business”?
   A. Every year
   B. 1 of 5
46. Which stage of life has the highest energy need?
   A. Mature maintenance
   B. First half of pregnancy
   C. Second half of pregnancy
   D. Early lactation

47. What would you do to diagnose failure of passive transfer in a foal?
   A. Test colostrums
   B. Test foal’s titer
   C. Test for immunoglobulin G
   D. Test for immunoglobulin M

48. Where does a horse have binocular vision?
   A. Directly in front
   B. To the left side
   C. To the right side
   D. Directly behind

49. Which is not a form of negative reinforcement?
   A. Punishment
   B. Flooding
   C. Escape
   D. Avoidance

50. What is the large muscle in the jaw that raises the jaw for chewing?
   A. Mandible
   B. Maxilla
   C. Manattah
   D. Massetter

THE END.
Congratulations on completing Exam II.
You have completed the exam phase of the Eastern National Hippology test.
Eastern National Hippology Contest

Written Test

Exam I

Carefully read each of the following questions, and enter the correct answer on your scantron sheet. Do not mark on this test. Make sure you are using the space for Exam I for this set of questions. Please completely fill in the space of your preferred answer. The management committee will not hand score questions that the scantron cannot read. Good luck on the exam.

1. What part of the hoof absorbs shock?
   a. Periople
   b. Hoof wall
   c. Frog HIH 505-2
   d. Sole

2. What breed of horses are used in harness racing?
   a. Standardbred HIH 171B-1
   b. Saddlebred
   c. Thoroughbred
   d. Hackney

3. The gestation period of a mare is approximately how many months?
   a. 9 months
   b. 10 months
   c. 11 months HIH 940-2
   d. 12 months

4. How much water does a mature horse drink in one day?
   a. 6-8 gallons
   b. 8-10 gallons
   c. 10-12 gallons HIH 710-7
   d. 12-14 gallons

5. What color horse has a yellowish or gold body, black main and tail, black lower legs, and no dorsal stripe?
   a. Buckskin HIH 140-1
   b. Dun
   c. Palomino
   d. Grullo

6. Which breed of horses can trace its heritage back to a horse named Hambletonian 10?
   a. Thoroughbred
b. Standardbred  HIH 171B-1

c. Arabian

d. Saddlebred

7. Which group would be creep fed?
   a. Weanlings
   b. Foals (Evans, 264)
   c. Yearlings
   d. Broodmares

8. What vitamin is vital for proper growth and development of the hoof?
   a. Vitamin A  HIH 505-2
   b. Vitamin C
   c. Vitamin D
   d. Vitamin E

9. What is the best and safest wire to use for horse fencing?
   a. Five diamond, V-mesh  HIH 350-3
   b. Rectangular woven wire
   c. High-tensile wire
   d. Polyvinyl chloride

10. What is the term for filing sharp points on a horse’s teeth?
    a. Smoothing
    b. Sanding
    c. Floating  HIH 405-2
    d. Culling

11. Which of the following is NOT a fat-soluble vitamin?
    a. Vitamin K
    b. Vitamin E
    c. Vitamin D
    d. Vitamin C  HIH 760-10

12. What type of hay, when improperly harvested, can cause Vitamin K deficiency?
    a. Timothy
    b. Alfalfa
    c. Orchard grass
    d. Clover (Evans, 256)

13. Which is a trace nutrient?
    a. Protein
    b. Calcium
    c. Iodine (Evans, 231)
    d. Magnesium
14. Which bone in the leg rotates in a horse suffering from founder?
   a. Navicular bone
   b. Short Pastern bone
   c. Coffin bone
   d. Cannon bone

15. Which gait has the fewest beats?
   a. Walk
   b. Canter (Evans, 176)
   c. Gallop
   d. Running Walk

16. What is the most important thing to consider in horse selection?
   a. Breed
   b. Color
   c. Conformation
   d. Use/purpose (Evans, 132)

17. What bones form the withers?
   a. Thoracic vertebrae and scapula (Evans, 151)
   b. Cervical vertebrae and scapula
   c. Sacral vertebrae and scapula
   d. Lumbar vertebrae and scapula

18. Which involves inflammation of the growth plate?
   a. Carpitis
   b. Arthritis
   c. Epiphysitis (Evans, 163)
   d. Metritis

19. What is the primary sign of iron deficiency?
   a. Colic
   b. Weight loss
   c. Anemia (Evans, 233)
   d. Depressed immune system

20. Which term is associated with colic?
   a. Volvulus (Dict. 285)
   b. Vitreous
   c. Viscous
   d. Vitiglio

21. What organization determines the needed nutrients for horses?
   a. U.S. Department of Agriculture
b. American Horse Council  
c. National Institute for Science  
d. National Research Council (Evans, 209)

22. Where is the cecum located?  
a. Junction of small intestine and colon (Evans, 192)  
b. Junction of stomach and small intestine  
c. Junction of esophagus and stomach  
d. Junction of colon and rectum

23. What hormone induces parturition?  
a. Progesterone  
b. Estrogen  
c. Parturition hormone  
d. Oxytocin

24. What structure produces Pregnant Mare's Serum Gonadotropin (PMSG)?  
a. Endometrial cups (Evans, 345)  
b. Corpus luteum  
c. Corpus hemorrhagicum  
d. Myometrial tissue

25. What horse disease is caused by the bacteria Streptococcus equi?  
a. Strangles HIH 615-1  
b. Equine viral arteritis  
c. Influenza  
d. Encephalomyelitis

26. Which of the following affect the gestation length of mares?  
a. Sex of the foal  
b. Month of conception  
c. Individual mare  
d. All of the above (Evans, 343)

27. What is used to measure the concentration of antibody in the horse's system?  
a. Vaccine  
b. Titer (Dict. 269)  
c. Hematocrit  
d. Antigen

28. Which term describes a gait that is short, quick, high and choppy?  
a. Rolling  
b. Snappy  
c. Rack  
d. Trappy (Evans, 181)
29. When does foal heat occur?
   a. Less than 2 weeks after foaling (Evans, 349)
   b. 2-3 weeks after foaling
   c. 3-4 weeks after foaling
   d. 5 or more weeks after foaling

30. The horse’s stomach makes up what percent of its digestive tract?
   a. 8%  HIH 710-2
   b. 15%
   c. 22%
   d. 29%

31. Which part of the English bridle, which includes the noseband, helps to keep the bridle in place and the horse’s mouth closed?
   a. Throatlatch
   b. Cavesson  HIH 1100-6
   c. Headstall
   d. Crown Piece

32. Which breed is most likely to wear a tail set?
   a. Thoroughbred
   b. Morgan
   c. Saddlebred (Dict. 262)
   d. Appaloosa

33. Who ensures that a race meeting is conducted according to the rules?
   a. Judge
   b. Jockeys
   c. Track owner
   d. Steward (Dict. 255)

34. Which is a skin condition?
   a. Seborrhea (Dict. 240)
   b. Seedy toe
   c. Scalping
   d. Polypuria

35. Which nutrient is necessary for health, but can be toxic if overfed?
   a. Vitamin B
   b. Vitamin C
   c. Calcium
   d. Selenium  (Dict. 24)

36. Which is also known as recurrent uveitis?
   a. Moon blindness (Dict. 230)
   b. Sun blindness
   c. Ictheria
   d. Uveoloma
37. Which one of the following DOES NOT contribute to a horse’s nutritional requirements?
   a. Age
   b. Type of Use or Activity
   c. The color of the animal. (HIH 120-3)
   d. The environment the animal lives in.

38. In the respiratory system, the alveoli are...
   e. The functional units of the lung where gas exchange usually occurs. (HIH 810-1)
   f. Blood vessels
   g. The functional unit of the trachea.
   h. Transitional cells that hold a reserve amount of oxygen so the lungs never run out.

39. Which part of the horse’s body is most commonly used to determine age in a horse?
   i. Skin/coat
   j. Back legs
   k. Teeth (HIH 240-1)
   l. Length of tail and mane

40. Which breed of horse originated in colonial Virginia and Carolina’s in the early 1600s?
   m. Arabian Horse
   n. Quarter Horse (HIH 1688-1)
   o. Saddlebred
   p. Standardbred

41. What condition may be caused by bruising the top of the head?
   a. Fistula
   b. Splint
   c. Pituitary tumor
   d. Poll evil (Dict. 217)

42. What do you call someone who trims and applies shoes to a horse’s hooves?
   a. Equestrian
   b. Farrier (HIH 110-5)
   c. Bridle
   d. Withers

43. What is the major cause of infertility in a mare?
   a. Age
   b. Improper Nutrition
   c. Uterine Infection (HIH 940-1)
   d. Poor breeding conformation
44. What is the most commonly used bit material?
   a. Copper
   b. Rubber
   c. Stainless Steel (HIH 1100-10)
   d. German Silver

45. Which discipline is a judged event designed to show the athletic ability of a ranch type horse in the confines of a show arena?
   a. Reining (HIH 183D-1)
   b. Dressage
   c. Eventing
   d. Vault

46. A horse’s respiration rate during rest will range from...?
   a. 40-30 breaths per minute
   b. 33-27 breaths per minute
   c. 21-25 breaths per minute
   d. 8-16 breaths per minute (HIH 851-3)

47. How often should hooves be trimmed or shod?
   a. Every week
   b. Once a year
   c. Every 12-14 weeks
   d. Every 6-8 weeks (HIH 110-4)

48. How much do horses contribute annually to the economy?
   a. 15 Billion (HIH 120-1)
   b. 15 Million
   c. 10 Million
   d. 1 Billion

49. Which bit can act as either a curb or a snaffle?
   a. Tom Thumb
   b. Pelham (Dict. 207)
   c. Egg Butt
   d. Spade

50. Which is part of the skull?
   a. Cervix
   b. Maxilla (Dict. 176)
   c. Humerus
   d. Tarsus

51. Which is a measure of the total blood volume that is occupied by red blood cells?
   a. Hemoglobin
   b. Hematocrit (Dict. 137)
   c. Hematome
   d. Hematocyte

52. How many pairs of chromosomes does the horse have?
   a. 32 (HIH 1020-1)
   b. 26
53. Which is a suppling exercise?
   a. Haunches in (Dict. 130)
   b. Rollback
   c. Sliding stop
   d. Piaffe

54. Which parasite is a actually a free living fly as an adult and can be seen on the hairs of the legs as eggs?
   a. Small Strongyles
   b. *Gastrophilus* (bots) (HIH 950-9)
   c. Tapeworm
   d. Parascari equorum

55. What is teasing?
   a. A method of halter breaking
   b. A method of determining if a mare is in estrus (Evans, 390)
   c. A method of training a horse to load
   d. A method of collecting stallions

56. Which is an example of a ginglymus joint?
   a. Atlanto-axial
   b. Jaw
   c. Shoulder
   d. Hock (Dict. 120)

57. What genotype is lethal?
   a. WW (Evans, 483)
   b. Ww
   c. ww
   d. Sl

58. What genetic disease is found in primarily in Arabian horses?
   a. HYPP
   b. SCID
   c. EIA
   d. OLWS

59. What temperature should collected semen be maintained at for immediate use?
   a. 90 degrees
   b. 95 degrees
   c. 100 degrees
   d. 105 degrees

60. What term refers to a disease that is constantly present in a geographic area?
   a. Contagious
b. Infectious
  c. Endemic (Dict. 91)
  d. Empyema

61. What stimulates a mare to begin her estrous cycles?
   a. Lengthening daylight (Evans, 393)
   b. Warmer temperatures
   c. Exposure to a stallion
   d. Grazing fresh grass

62. How many horns does the equine uterus have?
   a. 1
   b. 2
   c. 3
   d. 4

63. Septicemia is what type of infection?
   a. Joints
   b. Spinal cord
   c. Brain
   d. Blood (Evans 429)

64. What term describes identical paired genes?
   a. Heterozygotic
   b. Zygotic
   c. Homozygotic (Evans, 451)
   d. Synzygotic

65. What genotype changes a bay to a buckskin?
   a. DD
   b. Dd
   c. CC
   d. Cc^cr (Evans, 481)

66. A fecalith is____?
   a. A hardened piece of fecal material
   b. A decomposing fetus
   c. A stonelike mass that forms around a foreign object in the intestines
   d. A ball of ingesta that can cause an impaction (Dict. 105)

67. What term can be used to describe an overhanging top lip?
   a. Monkey mouth
   b. Parrot mouth
   c. Elk lip (Dict. 90)
d. Hare lip

68. What is semen morphology?
   a. Activity level of sperm cells
   b. Concentration of sperm cells
   c. **Shape of sperm cells**
   d. Volume of semen

69. Which color dominance statement is correct?
   a. Bay dominates black *(Evans, 479)*
   b. Chestnut dominates bay
   c. Black dominates gray
   d. Brown dominates bay

70. Which formula is used to calculate genetic progress per year?
   a. Generation Interval x Intensity Factor x Genetic standard deviation / Accuracy
   b. Accuracy x Generation Interval x Genetic standard deviation / Intensity Factor
   c. Accuracy x Intensity Factor x Generation Interval / Genetic standard deviation
   d. **Accuracy x Intensity Factor x Genetic standard deviation / Generation Interval** *(Evans, 557)*

71. Which is an inflammatory disease of the lungs?
   a. Strangles
   b. Influenza
   c. **Pneumonia** *(Evans, 597)*
   d. Encephalomyelitis

72. Where would a keratoma be found?
   a. Eye
   b. Nose
   c. **Hoof** *(Dict. 161)*
   d. Inside hind leg

73. Which can be treated with an anti-toxin?
   a. Influenza
   b. Equine Viral Arteritis
   c. Equine Encephalomyelitis
   d. **Tetanus** *(Evans, 601)*

74. Which disease is diagnosed with the Coggin’s test.
   a. Coggin’s disease
   b. Cushing’s disease
   c. **Equine Infectious Anemia** *(Evans, 601)*
75. A farrier tool used to cut off excess hoof growth is a?
   a. Rasp
   b. Clincher
   c. **Nippers (Dict. 190)**
   d. Clippers

76. What type of organism causes Potomac Horse Fever?
   a. Virus
   b. Bacteria
   c. Prion
   d. **Rickettsia** (HIH, 650-1)

77. What is defined as “any deviation in structure that interferes with the horses intended use or performance”?
   e. Conformation
   f. Blemishes
   g. Under-evaluation
   h. **Unsoundness** (HIH 230-1)

78. How many pommels are on a side saddle?
   a. 1
   b. 2 (HIH 184 D-1)
   c. 3
   d. 0

79. What country is the origin of the Exmoor pony?
   a. Germany
   b. Ireland
   c. Wales
   d. **England** (HIH 157B-1)

80. What is the preferred shape of the hindquarters; when viewed from the side?
   a. **Square** (HIH 220-7)
   b. Rectangular
   c. Triangle
   d. Circle

81. What deviation in travel is associated with horses that toe-in?
   a. Winging
   b. **Paddling** (HIH 230-5)
   c. Ropewalking
   d. Wobbling

82. Which term best describes a horse with excessive angulation in the hocks?
   a. **Sickle hocked** (HIH 230-7)
b. Cow hocked
c. Post legged
d. Bow legged

83. At what age does a horse get canine teeth?
   a. 1 year
   b. 2 years
   c. 4-5 years (HIH 240-1)
   d. 8-9 years

84. How many composting bins are recommended for 5 horses?
   a. 1
   b. 2 (HIH 365-3)
   c. 3
   d. 4

85. What parasite causes itching around the rectum?
   a. Strongyles
   b. Ascarids
   c. Strongyloides
   d. Pinworms (HIH 430-2)

86. Which parasite affects the liver?
   a. Strongyles (HIH 430-6)
   b. Bots
   c. Strongyloides
   d. Pinworms

87. Which provides immediate protection from the disease?
   a. Toxoid
   b. Anti toxin (HIH 445-2)
   c. Vaccination
   d. Antibiotic

88. Cushing’s disease is a tumor of what?
   a. Adrenal gland
   b. Thyroid gland
   c. Salivary gland
   d. Pituitary gland (HIH 450-5)

89. Which can cause laminitis?
   a. Metabolic disease
   b. Overwork
   c. Excessive feed
   d. All of the above (HIH 455-1)

90. Which is an ossification of the lateral cartilage?
a. Ringbone
b. Sidebone (HIH 455-5)
c. Elbow boil
d. Shoe boil

91. Which shoe would most likely be used on a horse with navicular disease?
   a. Heart bar
   b. Egg bar (HIH 515-4)
   c. Patten
d. Hospital plate

92. What type of bacteria causes thrush?
   a. Aerobic
   b. Anaerobic (HIH 540-1)
   c. Streptococcus
d. Staphylococcus

93. What causes white line disease?
   a. Aerobic bacteria
   b. Anaerobic bacteria
c. Fungus (HIH 540-1)
d. Parasite

94. Equine influenza affects what body system?
   a. Circulatory
   b. Cardiac
c. Reproductive
d. Respiratory (HIH 605-1)

95. Which disease is most likely to cause abortions?
   a. Rhinopneumonitis (HIH 610-1)
   b. Equine influenza
c. Potomac horse fever
d. West Nile virus

96. Transmission of what disease is associated with “carrier stallions”?
   a. Equine Infectious Anemia
   b. Equine Viral Arteritis (HIH 620-2)
   c. Equine Rhinopneumonitis
d. Encephalomyelitis

97. Which disease is not transmitted by mosquitos?
   a. Eastern Equine Encephalomyelitis
   b. Western Equine Encephalomyelitis
c. West Nile Virus
d. Salmonellosis (HIH)
98. Horses that are ‘asymptomatic’ ...
   a. Show no symptoms of the disease (HIH 625-1)
   b. Have uncommon disease symptoms
   c. Are severely affected by disease symptoms
   d. Have normal expression of disease symptoms

99. Which disease causes uncontrolled muscle contractions?
   a. Tetanus (HIH 645-1)
   b. Rabies
   c. Influenza
   d. Rhinopneumonitis

100. The rickettsial organism infects what type of cell?
    a. Red blood cell
    b. White blood cell (HIH 650-1)
    c. Lymph cells
    d. Nerve cells
Eastern National Hippology Contest

Written Test

Exam II

Carefully read each of the following questions, and enter the correct answer on your scantron sheet. Do not mark on this test. Make sure you are using the space for Exam II for this set of questions. Please completely fill in the space of your preferred answer. The management committee will not hand score questions that the scantron cannot read. Good luck on the exam.

1. Which disease has the shortest history in the United States?
   a. Salmonellosis
   b. West Nile Virus (HIH 665-1)
   c. Sleeping sickness
   d. Swamp fever

2. What are ‘dead end carriers’ of a virus?
   a. They die shortly after infection
   b. They don’t get sick or show any signs of the disease
   c. They do not create enough of the virus to transmit back to the vector (HIH 665-3)
   d. None of the above

3. Which is the best description of the horse’s digestive system?
   a. Non-ruminant
   b. Ruminant
   c. Monogastric
   d. Non-ruminant herbivore (HIH 710-1)

4. Which part of the equine digestive tract is small in relation to the rest of the tract?
   a. Stomach (HIH 710-1)
   b. Small intestine
   c. Large intestine
   d. Cecum

5. Where is the primary site of nutrient absorption in the digestive tract?
   a. Stomach
   b. Small intestine (HIH 710-1)
   c. Large intestine
   d. Cecum
6. Which class of horse has the highest nutritional needs?
   a. Working
   b. Idle
   c. Growing (HIH 710-3)
   d. Producing

7. Which body condition score is the healthiest for the horse?
   a. 2
   b. 5 (HIH 710-4)
   c. 7
   d. 9

8. What is a complete feed?
   a. Forage and concentrate in one feed (HIH 710-5)
   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

9. What forage may cause agalactia in mares?
   a. Alfalfa
   b. Clover
   c. Fescue (HIH 730-5)
   d. Orchardgrass

10. What is the problem with storing hay directly on concrete?
    a. Spontaneous combustion
    b. Contamination
    c. Moisture absorption (HIH 750-9)
    d. Loss of hay color

11. What forage can cause ‘slobbering’ in horses?
    a. Alfalfa
    b. Red clover (HIH 760-2)
    c. Lespedeza
    d. White clover

12. Which is a legume?
    a. Timothy
    b. Fescue
    c. Birdsfoot trefoil (HIH 760-2)
    d. Bahia

13. Which has the highest percent protein?
    a. Barley
    b. Corn
c. Wheat
d. Soybean meal (HIH 760-8)

14. Which disease can be caused by excess carbohydrate intake?
   a. Enteroliths
   b. Rhabdomyolysis (HIH 770-3)
   c. Developmental Orthopedic disease
   d. Anemia

15. When do the nutrient requirements increase for pregnant mares?
   a. First trimester
   b. Second trimester
   c. Third trimester (HIH 782-4)
   d. Conception

16. Where does ‘choke’ take place?
   a. Esophagus
   b. Lung sacs
   c. Trachea
   d. Alveoli

17. Where is oxygen bound on the red blood cell?
   a. Nucleus
   b. Hemoglobin (HIH 810-1)
   c. Endocrine
   d. Myoglobin

18. The diaphragm and intercostal muscles are most active during:
   a. Inspiration (HIH 810-1)
   b. Expiration
   c. Both
   d. Neither

19. Which is the lay term for Exercise Induced Pulmonary Hemorrhage?
   a. Lasix
   b. Bleeder (HIH 810-2)
   c. Wobbler
   d. Tying up

20. What is the role of the platelets in the horse’s blood?
   a. Oxygen carrying
   b. Fighting foreign bacteria
   c. Nutrient transportation
   d. Clotting (HIH 830-1)

21. Stroke volume is:
   a. The amount of blood pumped by the ventricle (HIH 830-1)
b. The amount of blood pumped by the atrium
c. The amount of blood traveling through the body at a given time
d. The amount of blood a horse can lose before having a stroke

22. Which fat soluble vitamin is associated with Selenium?
   a. Vitamin A
   b. Vitamin D
   c. Vitamin E (Lewis, 21)
   d. Vitamin K

23. Which mineral is part of Vitamin B12?
   a. Cobalt (Lewis, 39)
   b. Iron
   c. Magnesium
   d. Fluoride

24. Which Vitamin does not need to be in the equine diet?
   a. Vitamin A
   b. Vitamin B
   c. Vitamin C (Lewis, 59)
   d. Vitamin E

25. What is the effect of increased maturity on hay quality?
   a. Increases nutrients
   b. Increases fiber (Lewis, 68)
   c. Increases digestibility
   d. Increases palatability

26. Which processing method has a significant increase in starch digestion of feed?
   a. Grinding (Lewis, 77)
   b. Rolling
   c. Cracking
   d. Crushed

27. What lameness results from microfractures of the periosteal membrane?
   a. Splints
   b. Bucked shins (Lewis, 217)
   c. Ringbone
   d. Sidebone

28. What term describes the time when a mare is not cycling?
   a. Anestrus (Lewis, 235)
   b. Diestrus
   c. Monestrus
   d. polyestrus
29. When should mares be vaccinated to maximize the amount of antibodies in their colostrum?
   a. 2 weeks pre-foaling
   b. 3 weeks pre-foaling
   c. 4 weeks pre-foaling (Lewis, 2017)
   d. 6 weeks pre-foaling
30. Where is the lesion located that causes wobblers syndrome?
   b. Thoracic vertebrae
   c. Ulna/radius
   d. Tibia/fibula
31. Which is related to increased occurrence of Developmental Orthopedic Disease in foals?
   a. Lack of energy intake
   b. Excessive energy intake (Lewis, 2017)
   c. Excessive protein intake
   d. Lack of concentrate intake
32. Which toxic chemical can horses be exposed to through sawdust or shavings?
   a. Cyanide
   b. Helium
   c. Hydrochloric acid
   d. Jugalone (Lewis, 2017)
33. Which plant can cause photosensitivity in horses?
   a. Red clover
   b. Birdsfoot trefoil
   c. Lespedeza
   d. Alsike clover (Lewis, 2017)
34. Which plant causes death in horses?
   a. Yew (Lewis, 2017)
   b. Yellow sweet clover
   c. Skunk cabbage
   d. Locoweed
35. What feedstuff is most likely to be contaminated with the Mycotoxin Fumonisin?
   a. Corn (Lewis, 2017)
   b. Oats
   c. Barley
   d. Rye
36. What common livestock feedstuff is toxic to horses?
   a. Ionophores (Lewis, 2017)
   b. Silage
c. Round hay bales
d. Haylage

37. A stereotypic behavior is:
   a. Something the horse does twice
   b. A persistent, repetitive behavior with no apparent purpose (Lewis, 371)
   c. A vocal behavior
   d. A mimicking behavior

38. What is coprophagia?
   a. Eating of wood
   b. Eating of stones
   c. Eating of bedding
   d. Eating of feces (Lewis, 374)

39. What is ataxia?
   a. Loss of appetite
   b. Incoordination (Lewis, 381)
   c. A type of parasite
   d. A skin disease

40. Bishoping is:
   a. A procedure to correct splints
   b. A procedure to treat flexor tendon injuring
   c. A procedure to alter the appearance of the teeth (Lewis, 382)
   d. A procedure to train a horse to tolerate the saddle

41. Which is the smallest blood vessel?
   a. Artery
   b. Vein
   c. Capillary (Lewis, 384)
   d. Arteriole

42. Which defect is characterized by a high heel, short toe, and dished foot?
   a. Coon footed
   b. Club footed (Lewis, 385)
   c. Calf footed
   d. Cat footed

43. Inflammation of what tissue is known as a curb?
   a. Flexor tendon
   b. Collateral ligament
   c. Cruciate ligament
   d. Plantar ligament (Lewis, 386)

44. What is hematuria?
   a. Blood in the nose
   b. Blood in the lungs
   c. Blood in the semen
   d. Blood in the urine (Lewis, 392)

45. What hormone causes lysis of the corpus luteum?
   a. Progesterone
b. Estrogen
c. Prostaglandin (Lewis, 400)
d. Oxytocin

46. Laryngeal hemiplegia is also known as:
   a. Roaring (Lewis, 402)
   b. Bleeding
   c. Heaves
   d. Quittor

47. What term describes rewarding a behavior as it successively approximates the desired behavior?
   a. Luring
   b. Bribing
   c. Shaping (Evans, 669)
   d. Manifesting

48. Which schedule of reinforcements is used once a behavior is learned?
   a. Continuous
   b. Extinction
   c. Acquisition
   d. Intermittent (Evans, 668)

49. Which type of stimulus naturally elicits a response, with no training necessary?
   a. Unconditioned (Evans, 661)
   b. Conditioned
   c. Positive
   d. Negative

50. For which disease is euthanasia the most commonly recommended treatment?
   a. Laminitis
   b. Strangles
   c. Equine Infectious Anemia (HlH 630-1)
   d. Coggins’ disease
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Written Test

Exam I

Carefully read each of the following questions, and enter the correct answer on your scantron sheet. **Do not mark on this page.** Make sure you are using the space for **Exam I** for this set of questions. Please completely fill in the space of your preferred answer with a pencil. The management committee will not hand score questions that the scantron cannot read.

Good luck on the exam!!

1. The earliest members of the Equidae family had how many toes on each foot?
   - a. 4
   - b. 2
   - c. 3
   - d. 1

2. At racing speed, a Standardbred can trot at over:
   - a. 20 mph
   - b. 10 mph
   - c. 15 mph
   - d. **30 mph**

3. What is the first step in treating an abscess?
   - a. soak the area in epsom salt
   - b. give bute
   - c. **open the affected area and allow it to drain.**
   - d. antibiotics

4. The horse's field of binocular vision is:
   - a. approximately 95 degrees.
   - b. approximately 20 degrees.
   - c. approximately 80 degrees.
   - d. **approximately 65 degrees.**

5. Grulla horses are a sub-group of:
   - a. palominos
   - b. **dun-colored horses**
   - c. buckskins
   - d. black horses
6. What glands lubricate the eye?
   a. superior and posterior lacrimal glands
   b. anterior and posterior lacrimal glands
   c. **superior and inferior lacrimal glands**
   d. inferior and anterior lacrimal glands

7. This is defined as a pattern of movement.
   a. trot
   b. walk
   c. **gait**
   d. canter

8. The scientific classification of the domestic ass is _________________.
   a. Equus Domesticus
   b. Equus Callabus
   c. Equus Donkeas
   d. **Equus Asinus**

9. Which one of these gaits is not a "single-foot" gait?
   a. rack
   b. slow gait
   c. **walk**
   d. fox trot

10. Regarding coat color, black pigmented collors include all of these, **EXCEPT**:
    a. red dun
    b. black
    c. brown
    d. grulla

11. Hotblooded horses are defined as:
    a. horses that are 16.0 hands and under.
    b. horses that do not grow winter coats.
    c. **horses of Arabian descent**.
    d. horses that tend to spook easily.

12. Two bits are used in a full or Weymouth bridle. What is the small snaffle bit in this bridle called?
    a. bridoon
    b. snaffle
    c. gag
    d. skinny
13. A horse's olfactory sense is:
   a. its sense of smell
   b. its sense of touch
   c. its sense of sight
   d. its sense of taste

14. Which of the following equid had high crowned teeth?
   a. Mesohippus
   b. Prehorse
   c. Eohippus
   d. Pliohippus

15. What is the approximate size of the horse's field of vision for each eye?
   a. 360 degrees
   b. 250 degrees
   c. 180 degrees
   d. 245 degrees

16. Pigment cells are also called:
   a. eumelanin
   b. melanocytes
   c. melanin
   d. pheomelanin

17. The horse is all of the following except?
   a. Omnivore
   b. Herbivore
   c. Non-Ruminant
   d. Prey

18. What bit material increases salivation to make the mouth more responsive when used on a mouthpiece?
   a. german silver
   b. steel
   c. copper
   d. iron

19. How many chambers is the heart composed of?
   a. 2
   b. 3
   c. 4
   d. 6
20. This is the faster gait of harness horses:
   a. rack
   b. trot
   c. gallop
   d. pace

21. The process of passing genetic material to the next generation is called:
   a. reproducing
   b. heritage
   c. mating
   d. inheritance

22. This group has been a leader in equine genome research:
   a. The National Society of Animal Genetics
   b. The International Society of Animal Genetics
   c. The National Society of Equine Genetics
   d. The International Society of Equine Genetics

23. The haploid number of chromosomes in horses is:
   a. 31
   b. 22
   c. 32
   d. 33

24. Total range of vision for the horse is:
   a. 270 degrees
   b. 300 degrees
   c. 325 degrees
   d. 350 degrees

25. In the horse's small intestine soluble carbohydrates are digested into what simple structure to be absorbed and used as energy?
   a. glucose
   b. volatile fatty acids
   c. amino acids
   d. ketones

26. What bit is being described? This bit uses four reins. It is a one piece bit that functions like both a snaffle and a curb combined into one mouthpiece. One set of reins is attached to the rings and work like a snaffle and one set attaches to the shanks and adds leverage.
   a. pelham
   b. weymouth
   c. gag
   d. liverpool
27. A mule is defined as:
   a. a miniature burro.
   b. a male burro.
   c. **the offspring of a jack and a mare.**
   d. the offspring of a stallion and a jenny.

28. The first equid to walk permanently on one toe was the _________________.
   a. Pliohippus
   b. Eohippus
   c. Mesohippus
   d. **Merychippus**

29. At this gait, there are generally 3 feet on the ground at a time:
   a. walk
   b. trot
   c. canter
   d. gallop

30. Tostado' is the term used in South America to describe a horse that is:
   a. red-colored with red points.
   b. **red-colored with darker colored points.**
   c. red-colored with lighter-colored points.
   d. a grulla.

31. This disease is characterized by episodes of muscle tremors and weakness. Affected horses are hindered by high levels of potassium in the diet:
   a. Lethal White Foal Syndrome
   b. Hemophilia
   c. Severe Combined Immunodeficiency
   d. **Hyperkalemic Periodic Paralysis**

32. Appaloosas are commonly referred to as what type of breed?
   a. **stock horse**
   b. performance horse
   c. sporthorse
   d. halter horse

33. A horse that is predisposed to landing on the outside of its hoof walls stands on what type of base?
   a. bow legged
   b. base wide
   c. **base narrow**
   d. cow hocked
34. Which nomadic tribesman were the first breeders of the Arabian?
   a. Kazakh Nomads
   b. Bedouins
   c. Adivasi
   d. Beja

35. What is not a type of Buckskin or Dun colored horse?
   a. brindle dun
   b. grulla
   c. red dun
   d. gold dun

36. What is the maximum height allowed for horses to be registered at the American Miniature Horse Association?
   a. 32 inches
   b. 36 inches
   c. 40 inches
   d. 34 inches

37. American Paint Horses cannot be registered if they have lineage from what registry?
   a. AMHA
   b. APHA
   c. Jockey Club
   d. AQHA

38. What is not a type of insurance coverage for horses?
   a. Major Medical
   b. Loss of Use
   c. Workers Comp
   d. Mortality

39. What is not a type of Breeding Contract?
   a. Stallion Service Contract
   b. Mare Sharing
   c. Foal Sharing Agreement
   d. Mare Lease

40. What is not a critical factor in determining a facilities plan?
   a. Economic Feasability
   b. Drainage
   c. Ability to grow hay
   d. Area
41. Which type of use is Board Fencing not ideal for?
   a. Stallion Fencing
   b. Mares and Foals
   c. Show and Sale Horse Paddocks
   d. Arenas

42. Composting manure does not:
   a. kill nutrients
   b. kill fly eggs
   c. kill weed seeds
   d. kill larvae

43. What is the term for the accumulation of excessive synovial fluid in the joint capsule of the fetlock?
   a. fetlockitis
   b. bog spavin
   c. wind-puffs
   d. sesamoiditis

44. Night eyes are a common name for what structure on the horse?
   a. ergots
   b. chestnuts
   c. splints
   d. corns

45. Epiphora is the result of a blocked nasolacrimal duct and results in the overflow of what fluid?
   a. blood
   b. saliva
   c. sweat
   d. tears

46. What hoof disease is caused by hoof digesting fungi?
   a. sole disease
   b. thrush
   c. white line disease
   d. laminitis

47. As a horse ages the shape of the incisors changes from oval to what shape?
   a. triangular
   b. round
   c. square
   d. rectangular
48. Racing Quarter Horses can reach up to ____ when running:
   a. 18 mph
   b. **50 mph**
   c. 35 mph
   d. 40 mph

49. What two organs deliver enzymes and products into the duodenum to assist in the digestive process?
   a. gall bladder and bile duct
   b. **pancreas and liver**
   c. pancreas and gall bladder
   d. liver and bile duct

50. In what two breeds is Wobbler Syndrome most prevalent?
   a. Thoroughbred and Standardbred
   b. Quarter Horse and Arabian
   c. **Quarter Horse and Thoroughbred**
   d. Standardbred and Saddlebred

51. What structure connects the kidney to the bladder?
   a. urethra
   b. **ureter**
   c. liver
   d. bladder vein

52. The endometrium is the mucosal lining of what organ?
   a. epididymis
   b. vagina
   c. testicle
   d. **uterus**

53. In inches, how tall is a 15 hand horse?
   a. 48 inches
   b. **60 inches**
   c. 56 inches
   d. 63 inches

54. In describing a horse what would a “hat rack” be?
   a. an **emaciated horse**-very thin
   b. a low quality horse
   c. a fat horse
   d. a slow horse
55. In equine competition, what is a kur?
   a. a musical freestyle ride in dressage
   b. a stallion testing event
   c. a low quality horse
   d. a gymkhana class

56. An inflammation of the tarsal synovial membrane on the inside front portion of the joint causing a noticeable swelling is referred to as what?
   a. bog spavin
   b. bone spavin
   c. thoroughpin
   d. road gall

57. Name the movement of the horse where the horse trots in a very cadenced, floating manner, while moving forward with a marked period of suspension?
   a. Extended trot
   b. Piaffe
   c. Passage
   d. Park trot

58. In training, giving a reward when the horse performs the desired act or behavior is termed what?
   a. treating
   b. negative reinforcement
   c. bribery
   d. positive reinforcement

59. If you measure the distance from where one hoof leaves the ground to where the same foot again hits the ground what have you just measured?
   a. step length
   b. stride length
   c. gait length
   d. swing phase

60. In general terms what does the horse's adrenal gland produce?
   a. white blood cells
   b. saliva
   c. blood
   d. hormones

61. Endocarditis is an inflammation or infection of the lining of what organ?
   a. liver
   b. kidneys
   c. lung
   d. heart
62. Epinephrine is a very important hormone for the horse in stress situations and is produced by which organ?
   a. pineal gland
   b. kidneys
   c. pituitary gland
   d. adrenal gland

63. A blood mark on a horse is:
   a. small dark colored spots on the white areas of paint horses.
   b. a ring shaped pattern in the horse's coat.
   c. a dark colored 'splotch' on the basic coat color.
   d. a dark base coat with lighter colored hair on the flanks, girth, and muzzle.

64. In horse racing, what distance in miles is 6 furlongs?
   a. 3/4 mile
   b. 1/2 mile
   c. 1 mile
   d. 1 1/4 miles

65. Hyperkalemic Periodic Paralysis is found in certain descendents of what stallion?
   a. Secretariat
   b. Impressive
   c. Smarty Jones
   d. Man O’War

66. An accumulation of fluid in the alveoli from an infectious pulmonary problem would be termed what?
   a. pleurisy
   b. pulmonary edema
   c. bronchitis
   d. pneumonia

67. A Trakehner is an example of what type of horse?
   a. Warmblood
   b. Gaited
   c. Stock
   d. Draft

68. What term refers to the luster and shine of the hair coat?
   a. bloom
   b. dapple
   c. sheen
   d. satin
69. Protein metabolism results in nitrogenous waste products that are cleared from the body by what organ?
   a. large colon
   b. liver
   c. kidneys
   d. rectum

70. The length of the stride of the thoroughbred Secretariat was measured to be:
   a. 29 ft
   b. 21 ft
   c. 23 ft
   d. 35 ft

71. Name the hard enlargement on the plantar ligament that develops in response to stress.
   a. bursitis
   b. capped hock
   c. curb
   d. plantar fascitis

72. In reference to conformation, describe a horse that "walks downhill."
   a. they are heavy on the forehand
   b. the height at the withers is higher than the hip
   c. the front legs are shorter
   d. the height at the hip is higher than the height of the withers

73. In the racing industry, what is the term for a race horse's best time?
   a. black type
   b. personal best
   c. record
   d. mark

74. This disease is also called Megacolon:
   a. Hemophilia
   b. Lethal White Foal Syndrome
   c. Severe Combined Immunodeficiency
   d. Hyperkalemic Periodic Paralysis

75. The position of a gene on a chromosome:
   a. polygenic
   b. allele
   c. genotype
   d. locus
76. A supple horse uses what part of its body to aid in balance and stability?
   a. barrel
   b. tail
   c. **head and neck**
   d. legs

77. In general, what is the most common lameness problem in Standardbred race horses?
   a. inflammation of the stifles
   b. **inflammation of the hocks**
   c. inflammation of the fetlocks
   d. navicular disease

78. If a pair of alleles are not identical, what should that individual be considered with respect to those genes?
   a. polyzygous
   b. homozygous
   c. monozygous
   d. **heterozygous**

79. In order to breed the mare at an optimal time many large breeding programs use a stallion that is not intended to be used as the stud for the mare to see if a mare is receptive to breeding. What is the term for this stallion?
   a. gomer
   b. **teaser**
   c. gelding
   d. ridgeling

80. In what age group of horses is epiphysitis associated?
   a. hard working horses
   b. pregnant mares
   c. **growing horses**
   d. geriatric horses

81. What is the most common blemish of the hind limbs?
   a. **Capped hock**
   b. Splint
   c. Bowed tendon
   d. Curb

82. In what area of the World did the Barb originate?
   a. Italy
   b. Arabian peninsula
   c. Spain
   d. **Northern Africa**
83. What is not an identifiable Appaloosa characteristic?
   a. white sclera
   b. mottled skin
   c. vertically striped hooves
   d. white on face

84. Osselets is the term for an inflammation of the periosteum on the anterior surface of what joint?
   a. stifle
   b. knee
   c. fetlock
   d. hock

85. Prior to 1908, the American Jockey Club registered two other breeds of horse besides the Thoroughbred. What two breeds were they?
   a. Arabian and Anglo-Arab
   b. Standardbred and Saddlebred
   c. Quarter Horse and Arabian
   d. Arabian and Standardbred

86. What is termed the “most useful gait” of the horse?
   a. gallop
   b. trot
   c. canter
   d. walk

87. What is the western version of the standing martingale?
   a. collar
   b. running martingale
   c. breastplate
   d. tie down

88. What term describes a horse with a stride that is short, quick, high and often choppy?
   a. Springy
   b. Trappy
   c. Suspension
   d. Elegant

89. Protein is composed of a chain of small units called what?
   a. aminoacids
   b. nitrogen
   c. vitamins
   d. minerals
90. Osteoblasts form a protein matrix that ultimately forms what tissue?
   a. cartilage  
   b. **bone**  
   c. smooth muscle  
   d. striated muscle

91. Which grain is the highest source of energy?
   a. Wheat  
   b. Oats  
   c. Barley  
   d. **Corn**

92. Corn infected with aflatoxins can cause damage to what organ of the horse's body?
   a. stomach  
   b. kidneys  
   c. **liver**  
   d. intestines

93. Name the hardest-working joint in the horse’s body.
   a. stifle joint  
   b. **hock joint**  
   c. shoulder joint  
   d. sacro-iliac joint

94. The King Ranch of Texas developed a linebreeding program around one Quarter Horse stallion that they felt fit their ideal of the working cow horse. Who was this horse?
   a. Black Hand  
   b. Wimpy P-1  
   c. **Old Sorrel**  
   d. Allen F-1

95. At what time of the year is Yellow Star Thistle a problem for horses?
   a. late summer and into the fall  
   b. early spring  
   c. mid summer  
   d. late fall

96. In what country were horse with the colorful characteristics of the Appaloosa first seen?
   a. **China**  
   b. Japan  
   c. India  
   d. Turkestan
97. How many teats does a mare have?
   a. 4
   b. 2
   c. 1
   d. 3

98. On what continent did the first "true horse" originate?
   a. Asia
   b. North America
   c. South America
   d. Africa

99. What is the general term that describes the color of a bay and white pinto?
   a. piebald
   b. tobiano
   c. overo
   d. skewbald

100. In reference to color inheritance, there are six modifications of the black coat color, all of which have black points except one, which is:
    a. perlino
    b. cremello
    c. chestnut
    d. brown
Exam II

Carefully read each of the following questions, and enter the correct answer on your scantron sheet. Do not mark on this page. Make sure you are using the space for Exam II for this set of questions. Please completely fill in the space of your preferred answer with a pencil. The management committee will not hand score questions that the scantron cannot read.

Good luck on the exam!!

1. What is the average heart-weight to body-weight ratio of the horse?
   a. 0.005
   b. 0.0094
   c. 0.015
   d. 0.02

2. The amount of water in a horse’s body accounts for approximately what percent of total body weight?
   a. 0.87
   b. 0.5
   c. 0.75
   d. 0.66

3. What is the correct formula to convert Fahrenheit to Celsius?
   a. \((F+32) \times \frac{5}{9} = C\)
   b. \((C+32) \times \frac{5}{9} = C\)
   c. \((F+52) \times \frac{5}{9} = C\)
   d. \((C+52) \times \frac{5}{9} = C\)

4. Name the organ designed to store urine.
   a. kidney
   b. liver
   c. bladder
   d. ureter

5. A horse that is extremely sickle hocked is prone to what unsoundness of the hock?
   a. capped hock
   b. curb
   c. bone spavin
   d. stifle lock
6. The best situation to take “normal” vital signs of your horse is:
   a. At rest
   b. Right after exercise
   c. When the weather is below 32F
   d. When the weather is hot and humid

7. What is the filtrate of the kidney called?
   a. plasma
   b. pus
   c. water
   d. urine

8. Animals that go into shock will present with:
   a. Slower capillary refill time
   b. Faster capillary refill time
   c. Increased salivation
   d. Very moist mucosa

9. What type of organs are the eyes, ears, and nose?
   a. alimentary
   b. sensory
   c. digestive
   d. excretory

10. What is the name of the muscle that underlies the horse's skin and enables it to twitch and shake flies off its body?
   a. mandible
   b. flank
   c. gaskin
   d. panniculus

11. These are examples of equine bacterial diseases, EXCEPT:
    a. Salmonellosis
    b. Strangles
    c. Histoplasmosis
    d. Tetanus

12. In horses as well as other mammals, light rays enter the lens of the eye and are focused on what?
    a. the iris
    b. the retina
    c. the cornea
    d. the pupil
13. What hormone is responsible for the formation of the corpus luteum?
   a. estrogen
   b. oxytocin
   c. progesterone
   d. **luteinizing hormone**

14. These are examples of equine protozoal diseases, **EXCEPT**:
   a. Leptospirosis
   b. Potomac Horse Fever
   c. Piroplasmosis
   d. EPM

15. What is another term for the skin that covers the horse's body?
   a. **integument**
   b. ligament
   c. denteyne
   d. dermatitis

16. The base coat color of a red roan is:
   a. chestnut
   b. **bay**
   c. palomino
   d. brown

17. Give the name for the horny growth behind the fetlock joint.
   a. ergot
   b. chestnut
   c. frog
   d. coffin bone

18. What is the name for the long, individual hairs that often mix with the dense undercoat of the horse, especially under the belly?
   a. insulating hairs
   b. surface hairs
   c. wild hairs
   d. **guard hairs or cat hairs**

19. A group of horses possessing specific distinguishable characteristics, such as function, conformation, and color that are not common to other horses would be defined by what term?
   a. breed
   b. species
   c. family
   d. pod
20. Colic, a general term for abdominal pain, is a major cause of what in horses?
   a. expense  
   b. lost work  
   c. death  
   d. all choices

21. In what region is the jugular vein located?
   a. the neck  
   b. the shoulder  
   c. the hind leg  
   d. the abdomen

22. Sleeping sickness is a generic name given to these diseases, **EXCEPT**:
   a. EEE  
   b. WEE  
   c. VEE  
   d. EPM

23. Parrot mouth or overshot jaw is a conformation defect involving what bone?
   a. maxilla  
   b. mandible  
   c. temporal bone  
   d. scapula

24. How much of the horse’s body weight is maintained by the front legs?
   a. 60-65%  
   b. 45-50%  
   c. 70-75%  
   d. 20-25%

25. Name the term used when the cannon is not centered in the knee as viewed from the front.
   a. bow-legged  
   b. knock kneed  
   c. **bench knee**  
   d. over at the knees

26. Ringbone can be classified as high or low. If it involves the pastern joint how is it classified?
   a. **high ringbone**  
   b. low ringbone  
   c. sidebone  
   d. osselots
27. Name the condition in which the frog is narrow and shrunken and the heels of the foot are pulled together.
   a. seedy toe
   b. thrush
   c. sheared hoof
   d. **contracted heels**

28. Name the general term given to mares that possess the breeding unsoundness of a tipped vulva that causes aspiration of air into the vagina, leading to chronic infection.
   a. **windsuckers**
   b. windjammers
   c. aeromares
   d. aerophagia

29. What breeds are allowed to compete in Dressage?
   a. Trakehner
   b. Warmblood
   c. Thoroughbred
   d. **Any**

30. What are bony lumps that develop on various bones throughout the body?
   a. panniculitis
   b. sarcoids
   c. sebaceous cysts
   d. **hereditary multiple exostosis**

31. What basic saddle is “flat saddle” referring to?
   a. **saddle seat**
   b. hunt saddle
   c. Australian saddle
   d. close contact saddle

32. The hackamore bit does not have what?
   a. leverage
   b. curb strap/chain
   c. headstall
   d. **mouthpiece**

33. What type of hay is higher in calcium and protein?
   a. mixed hay
   b. grass hay
   c. **legume hay**
   d. timothy hay
34. What is the minimum width for a stall door?
   a. 4 feet
   b. 5 feet
   c. 6 feet
   d. 7 feet

35. Coolers are generally made of what two materials?
   a. cotton or nylon
   b. **wool or polar fleece**
   c. nylon or wool
   d. synthetic material or polar fleece

36. How many billets are usually on a forward seat saddle?
   a. 3
   b. 2
   c. 1
   d. 4

37. A proper fitting stirrup iron should allow how much room on each side of the ball of the foot when placed in the stirrup?
   a. 1/2 inch
   b. none
   c. **1/4 inch**
   d. 1 inch

38. What are closed reins with flexible romel on end to be held in both hands?
   a. Canadian reins
   b. Texas reins
   c. Colorado reins
   d. **California reins**

39. How often should a horse be trimmed or shod?
   a. every 4-6 weeks
   b. **every 6-8 weeks**
   c. every 8-10 weeks
   d. 3 times/year

40. Which grain should not make up more than 50% of the horses grain mix because of the potential problem of forming a dough-ball in the horse's stomach?
   a. oats
   b. **wheat**
   c. corn
   d. barley
41. What is the most commonly used technique for estimating body weight of the horse?
   a. ultrasound
   b. body condition scoring
   c. scale
   d. heart or girth tape/ weight tape

42. These endoparasites affect generally horses that are less than 1 year of age, as adult horses seem to develop immunity to these parasites as they get older:
   a. Small strongyles
   b. Ascarids
   c. Oxyuris
   d. Habronema

43. In the horse, what type of teeth are permanent and never shed?
   a. molars
   b. incisors
   c. premolars
   d. wolf teeth

44. Horses begin to grow their winter coat in response to what stimulus?
   a. increase in daylight
   b. decrease in temperature
   c. decrease in daylight hours
   d. increase in temperature

45. According to the Horse Industry Handbook, a hay ration for mature horses should contain what percentage crude protein?
   a. 16-20%
   b. 4-6%
   c. 8-12%
   d. 12-16%

46. Each breed organization has defined the ideal horse for its breed. What do we call the arrangement of muscle, bone and other body tissue used to judge this ideal horse?
   a. conformation
   b. confirmation
   c. structure
   d. type

47. This disease is transmitted by the bite of an infected animal, as the virus is present in the saliva:
   a. EPM
   b. EEE
   c. Potomac Horse Fever
   d. Rabies
48. What is the name for the exterior opening to the reproductive canal?
   a. vagina
   b. **vulva**
   c. rectum
   d. cervix

49. What is the primary function of FSH in the stallion?
   a. **stimulates spermatogenesis**
   b. stimulate sexual behavior
   c. stallions don't have FSH
   d. increase libido

50. In reference to a horse's foot, where would you find a corn?
   a. **in the heel area of the sole**
   b. bulbs of the heels
   c. on the toe, under the shoe
   d. in the frog
1. The ____________ is caudal to the withers.
   A. poll
   B. carpus
   C. tarsus
   D. shoulder

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

3. The ____________ are considered to be vestiges of the carpal and tarsal pads of carnivores.
   A. ergot
   B. chestnut
   C. night-eyes
   D. both b and c

4. A ________ is a white patch between the nostrils.
   A. bald face
   B. star
   C. stripe
   D. snip

5. Epidermis tissue is:
   A. dense fibrous tissue
   B. stratified squamous tissue
   C. collagenous tissue
   D. loose connective tissue

6. Smegma from the prepuce is produced by:
   A. sebaceous glands
   B. apocrine tubular glands
   C. subcutis
   D. dermis

7. Secretion of sweat by ____________ glands is stimulated by motor nerves and by the hormone ________.
   A. sebaceous, epinephrine
   B. sensory, testosterone
   C. apocrine, epinephrine
   D. sebaceous, testosterone

8. Mammary glands are highly developed and modified…
   A. paracrine glands
   B. apocrine glands
   C. autocrine glands
9. The sternum is part of the:
   A. appendicular skeleton
   B. **axial skeleton**
   C. forelimb
   D. hindlimb

10. The correct equine vertebral formula is:
    A. \( C_7 T_{18} L_6 S_5 Ca_{15-21} \)
    B. \( C_7 T_{18} L_9 S_5 Ca_{15-21} \)
    C. \( C_7 T_{13} L_6 S_5 Ca_{15-21} \)
    D. \( C_7 T_{13} L_6 S_5 Ca_{15-21} \)

11. The wings of the atlas and sacrum are:
    A. vertebral processes
    B. articular surfaces
    C. spinous processes
    **D. transverse processes**

12. The most common cause of wobbler syndrome is malformation of certain ___________ vertebrae.
    A. lumbar
    B. thoracic
    C. **cervical**
    D. sacral

13. The second cervical vertebrae is known as the ________.
    A. axis
    B. atlas
    C. caudal
    D. dens

14. The horse has ________ pairs of ribs.
    A. 15
    B. **18**
    C. 13
    D. 20

15. Floating ribs are:
    A. true ribs
    B. **asternal ribs**
    C. sternebrae
    D. xiphoid processes

16. Initial domestication of horses occurred in which places between 2500 B.C and 4500 BC
    A. China and Poland
    B. **China and Mesopotamia**
    C. Spain and France
    D. France and India

17. The fact that horses were **not** brought to America by Spanish conquistadors in 1519 is strongly supported by which piece of evidence:
A. the mustang breed does not share common characteristics of the Spanish breeds
B. DNA evidence proves that there are no Spanish blood lines in the American mustang
C. large Spanish missions in early 1600 were established and provided an introduction of working horse to Indians
D. wild mustangs most likely came from Coronado in 1540 or Desoto in 1541

18. In 1918 the United States’ use of the work horse peaked, at this point approximately how many head of horses were documented in the states?
   A. 10 million
   B. 25 million
   C. 21 million
   D. 16 million

19. Why does the horse rank low on the intelligence test?
   A. lacks ability to reason
   B. can respond to cues
   C. has no long term memory
   D. cannot distinguish subtle cues

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

21. 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

22. 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

23. The head consists of 34 irregularly shaped flat bones. What type of joints are in the cranium?
   A. immovable
   B. glide
   C. permanent
   D. flexible

24. Which of the following is not true about the nasal cavity:
   A. scroll shaped turbinate bones deflect air through nasal passage way
   B. mucous lining has sensory nerve endings
   C. is connected to respiratory system
   D. has cilia to facilitate movement of mucus

25. The male horse has 40-42 teeth and the female 36-38. Why is this fluctuation in numbers possible?
   A. difference in breeds
B. canines  
C. wolf teeth  
D. inbreeding causing decease in teeth

26. P in the dental formula stands for what?  
A. post incisor  
B. premature canine  
C. premolar  
D. pre incisor

27. What is the name of the groove on the horse’s upper incisors that can be used to tell a horse’s age from 10-30 years?  
A. Cantanda’s groove  
B. Galvayne’s groove  
C. tuberosity groove  
D. Sudden’s groove

28. Why can a horse’s teeth only offer an “estimate” of age?  
A. environmental conditions  
B. breed differences  
C. horses lose teeth too often  
D. genetic conditions may impede tooth growth

29. Which of the following is not a joint of the front limb?  
A. carpus  
B. pastern  
C. coffin  
D. hock

30. The largest tissue mass in the horse’s body is:  
A. skin  
B. muscle  
C. intestines  
D. blood

31. Type one muscle fibers are known as:  
A. slow twitch  
B. fast twitch  
C. high glycolytic  
D. high oxidative

32. What is the name of the blemish caused by thickening of the plantar ligament?  
A. curb  
B. wind gall  
C. windpuffs  
D. bursitis

33. What bond in ATP provides the most energy when broken?  
A. phosphate  
B. adenine  
C. thyrine
34. What is the name of the organelle in muscle tissue responsible for ATP production?
   A. lysosomes  
   B. **mitochondria**  
   C. endoplasmic reticulum  
   D. golgi body

35. The following are functions of the respiratory system **except**: 
   A. removal of gas  
   B. temperature regulations  
   C. phonation  
   D. **ion exchange**

36. What is the name of the cartilaginous flap that covers the trachea during swallowing?
   A. larynx  
   B. pharynx  
   C. **epiglottis**  
   D. arytenoid

37. The nasal cavities are divided into three channels. Which is **not** one of them?
   A. dorsal meatus  
   B. middle meatus  
   C. ventral meatus  
   D. **caudal meatus**

38. This disease is characterized by the destruction of a foal’s red blood cells by serum antibodies in the colostrum of the mare:
   A. combined immunodeficiency  
   B. **isoerythrolysis**  
   C. lethal white  
   D. hemophilia

39. Oxygen uptake in the horse is approximately:
   A. 30 L/min  
   B. **1.8 L/min**  
   C. 6.4 L/min  
   D. 15.2 L/min

40. Poisoning by Japanese yew will cause:
   A. liver cirrhosis  
   B. hemolytic anemia  
   C. photosensitization  
   D. **nervous system damage**

41. Which side of the heart has a thicker wall and why?
   A. left because there is more room in the cavity for growth  
   B. **left because it must supply force to move blood through systemic circulation**  
   C. right because it must supply force to move blood through systemic circulation  
   D. right because the cardiac notch in the lung provides excellent oxygenation of the tissue
42. Geophagia is the act of eating:
   A. dirt  
   B. wood  
   C. feces  
   D. hair  

43. Endometrial cups are formed on the ____ day of gestation
   A. 30th  
   B. 32nd  
   C. 36th  
   D. 40th  

44. Relaxin is secreted by the:
   A. uterus  
   B. placenta  
   C. udder  
   D. ovaries  

45. The Thoroughbred stallion Three Bars has produced many:
   A. eventing champions  
   B. hunter-jumper champions  
   C. racing Quarter Horses  
   D. dressage champions  

46. At rest, a horse’s cardiac output is approximately:
   A. 35 liters/min  
   B. 20 liters/min  
   C. 10 liters/min  
   D. 12.5 liters/min  

47. What is the term for the blood stored in the spleen?
   A. reserve erythrocytes  
   B. splanchnic reservoir  
   C. leukocytopenia  
   D. spleen expansion and contraction  

48. The life span of erythrocytes is:
   A. 120-130 days  
   B. 100-120 days  
   C. 120-150 days  
   D. 150-180 days  

49. The vomeronasal organ contains:
   A. olfactory receptors  
   B. gustatory receptors  
   C. auditory receptors  
   D. salivary receptors  

50. Myopia is when the image is formed:
   A. in front of the eye
B. in front of the retina
C. behind the eye
D. behind the retina

51. A chronic, purulent swelling of the lateral cartilage of the hoof, resulting in subcoronary abscesses is called:
   A. quittor
   B. spavin
   C. corn
   D. gravel

52. Cross-firing is when:
   A. the forefoot on one side strikes the other forefoot
   B. the hindfoot on one side strikes the other hindfoot
   C. the hindfoot on one side strikes the forefoot on the same side
   D. the hindfoot on one side strikes the diagonal forefoot

53. Trypsin, chymotrypsin and carboxypeptidase are enzymes that digest:
   A. carbohydrates
   B. lipids
   C. protein
   D. minerals

54. Microbes in the hindgut ferment carbohydrates and the end products are:
   A. volatile fatty acids
   B. amino acids
   C. PSGAGs
   D. glycosaminoglycans

55. Soybean meal contains approximately ____ protein:
   A. 20%
   B. 30%
   C. 45%
   D. 60%

56. The hip joint is an example of a ______ joint.
   A. ball-and-socket
   B. hinge
   C. pivot
   D. plane

57. The radius combines with what bone to form the forearm?
   A. scapula
   B. humerus
   C. ulna
   D. knee

58. What is the common name for the outer coverings of grains?
   A. hulls
   B. shells
   C. meal
59. What is the name of the hormone secreted by the pituitary gland which stimulates the adrenals to secrete corticosteroids?
   A. TSH
   B. adrenaline
   C. GH
   D. ACTH

60. On what chromosome does the gene for hemophilia ride?
   A. XY chromosome
   B. X chromosome
   C. Y chromosome
   D. chromosome 23

61. The _______ characterizes the proximal and distal ends of long bones.
   A. endosteum
   B. diaphysis
   C. epiphysis
   D. periosteum

62. Blood for the bone is supplied by vessels in the periosteum and the:
   A. nutrient foramen
   B. nutrient artery
   C. nutrient vein
   D. marrow cavity

63. The cannon bone is also known as the_______
   A. second metacarpal
   B. third metacarpal
   C. fourth metacarpal
   D. third metatarsal

64. The coffin bone is also known as the_______
   A. middle phalanx
   B. first phalanx
   C. distal sesamoid
   D. third phalanx

65. How are horses infected with strongyloides?
   A. mare’s milk
   B. grass
   C. feces
   D. contaminated water

66. Name the condition found in growing foals whose joint cartilage does not properly differentiate.
   A. osteochondrosis dissecans (OCD)
   B. splints
   C. osteitis
   D. ting bone
67. What is the name of the Australian wild horse?
   A.ambi
   B. brumby
   C. australian mustangs
   D. aborigines

68. This is a warm season grass:
   A. bluegrass
   B. fescue
   C. bermudagrass
   D. timothy

69. The condyle of the humerus, proximal end of the radius and trochlear notch of the ulna all make up the ____ ___joint.
   A. antebrachiocarpal
   B. radioulnar
   C. elbow
   D. shoulder

70. This disease is caused by insufficient corticosteroid production by the adrenal glands:
   A. Cushing’s disease
   B. Chrone’s disease
   C. Addison’s disease
   D. Abu’urqub disease

71. A lack of hair in areas where hair should be normally present is called:
   A. atopia
   B. alopecia
   C. scaling off
   D. rain rot

72. The word “bactericidal” means:
   A. able to kill bacteria
   B. able to stop the growth of bacteria
   C. able to multiply bacteria
   D. able to identify bacteria

73. The word “cachexia” means:
   A. lack of appetite
   B. obesity
   C. lame
   D. wasting and malnutrition

74. The poison found in blister beetles is called:
   A. gossypol
   B. tannin
   C. cantharidin
   D. lanthanum

75. A fatal genetic disease that affects Arabian foals and impedes the formation of their own antibodies:
   A. RAO
76. This racehorse was unbeaten in 24 races in 1764, and today most Thoroughbreds trace back to him:
   A. Eclipse
   B. Commander
   C. Comanche
   D. Man O’War

77. The oldest known ancestor of the modern horse is:
   A. pliohippus
   B. mesohippus
   C. eohippus
   D. yherohippus

78. The disease characterized by muscle mass being broken down after strenuous exercise is:
   A. azoturia
   B. tying up
   C. exertional rhabdomyolysis
   D. all of the above

79. This was the first carriage used for public service:
   A. fiacre
   B. duc
   C. dorsay
   D. derby

80. These parasites can cause summer sores:
   A. strongyles
   B. ascarids
   C. habronema
   D. anaplocephala

81. The cowboy in steer wrestling that rides on the opposite side of the steer that is being wrestled is called:
   A. bulldog
   B. hazer
   C. bull fighter
   D. heeler

82. The offspring of a female donkey bred to a male horse is called:
   A. mule
   B. jack
   C. jenny
   D. hinny

83. A hog’s back is:
   A. a type of jump
   B. a type of rope
   C. a type of saddle
D. a type of saddle pad

84. An abnormally long hair coat is called:
   A. shaggy
   B. pituitarysm
   C. hirsutism
   D. alopecism

85. The equipment used to determine the angle of the hoof relative to the ground is:
   A. hoof pick
   B. hoof tester
   C. hoof gauge
   D. hoof nipper

86. Hyperkalemia is:
   A. high levels of calcium in the blood
   B. high levels of potassium in the blood
   C. high levels of sodium in the blood
   D. high levels of chlorine in the blood

87. The area in the chest cavity that contains the heart, the trachea and the esophagus is called:
   A. mediastinum
   B. pleura
   C. peritoneum
   D. linea alba

88. Orchitis means:
   A. inflammation of the olfactory nerve
   B. infection of the uterus
   C. infection of the ovaries
   D. inflammation of the testes

89. A maiden mare is one that:
   A. is unable to get in foal
   B. has never been bred
   C. has aborted recently
   D. was not bred during the last season

90. The first stage of parturition ends when:
   A. the foal is expelled
   B. the first water bag appears
   C. the first water bag breaks
   D. the placenta is expelled

91. A bay horse with 2 cream dilution genes will be:
   A. cremello
   B. brown
   C. buckskin
   D. perlino
92. The metacarpophalangeal joint is also known as the:
   A. pastern joint
   B. coffin joint
   C. **fetlock joint**
   D. cubital joint

93. _______ are swellings of the palmar recess of the fetlock joint capsule, due to an excessive amount of synovial fluid produced by the synovial membrane of the fetlock joint:
   A. ergots
   B. bone spavins
   C. capped hocks
   D. **wind puffs**

94. Antebrachial fascia is found in the:
   A. **forelimb**
   B. hindlimb
   C. Trunk
   D. Sternum

95. _______ is a term for muscle inflammation:
   A. endosytis
   B. **myositis**
   C. arthritis
   D. myelin

96. Abduction is a term for the movement of a limb ______ the body
   A. away from
   B. to the right of
   C. to the left of
   D. towards

97. The longest muscle on the horse is called:
   A. latissimus
   B. omotransversarius
   C. **longissimus**
   D. sternomandibularis

98. Thickening caused by inflammation of a flexor tendon is commonly called a _______ and occurs most frequently in the superficial digital flexor tendon.
   A. splint
   B. curb
   C. bog spavin
   D. **bowed tendon**

99. Hyperlipemia, which is high levels of fat in the blood, can be produced in healthy animals by:
   A. providing a meal rich in fat content
   B. providing a meal high in carbohydrates
   C. **withholding food**
   D. withholding water

100. ___________ refers to the procedure of cutting a palmar or plantar digital nerve to relieve pain.
    A. Sweeney
B. Blocking  
C. Nerving  
D. Desmotomy
1. Veins differ from arteries in that they:
   A. have thicker walls
   B. don’t usually have valves
   C. have valves, the cusps which direct blood away from the heart
   D. contain a larger volume of blood

2. Blood reaching the foot flows through the following sequence of arteries:
   A. median, medial and lateral digital, brachial, axillary, medial palmar
   B. axillary, brachial, median, medial palmar, medial and lateral digital
   C. medial and lateral digital, brachial, median, medial palmar, axillary
   D. brachial, axillary, median, medial palmar, medial and lateral digital

3. The ____________ is the junction of the skin and the soft horn of the periople.
   A. coronet
   B. heel
   C. quarter
   D. toe

4. ____ is a chronic infection of the frog in which dark, foul-smelling dead tissue occurs in the central and collateral grooves.
   A. White line disease
   B. Navicular disease
   C. Laminitis
   D. Thrush

5. The __________ is collagenous connective tissue immediately beneath the hoof wall, containing many nourishing blood vessels and nerve endings.
   A. corium
   B. periople
   C. laminae
   D. white line

6. Navicular disease is a progressive, degenerative condition of the navicular bone, also affecting the navicular bursa and overlying ____________.
   A. Superficial digital flexor tendon
   B. Deep digital flexor tendon
   C. Distal sesamoidean ligaments
   D. Collateral sesamoidean ligaments

7. Bones of the pelvic girdle include all of the following except:
   A. ilium
   B. caudal vertebrae
   C. femur
   D. sacrum
8. The greater trochanter is located on the ________ surface of the femur
   A. medial
   B. lateral
   C. cranial
   D. caudal

9. Bones of the hock include all of the following except:
   A. talus
   B. calcaneus
   C. third metatarsal bone
   D. accessory bone

10. Psyllium is fed to horses which are predisposed to having:
    A. sand colic
    B. anemia
    C. constipation
    D. diarrhea

11. The stifle joint is made up of the:
    A. femoropatellar joint and femorotibial joint
    B. coxofemoral joint and the femoropatellar joint
    C. femororadial joint and the coxofemoral joint
    D. coxofemoral joint and the hip joint

12. The suspensory apparatus is important for holding which joint?
    A. Stifle
    B. Hock
    C. Coffin
    D. Fetlock

13. The sutures of the skull and syndesmosis joints between shafts of some long bones are both examples of ___ ________ joints.
    A. cartilaginous
    B. fibrous
    C. synovial
    D. ellipsoid

14. Which of the following does not act to flex the hip joint?
    A. iliopsoas
    B. sartorial
    C. semimembranosus
    D. straight femoral

15. Appaloosas are commonly referred to as what type of breed?
    A. stock horse
    B. performance horse
    C. sporthorse
    D. halter horse
16. Approximately how many Arabians are registered in the United States?  
   A. 800,000  
   B. 600,000  
   C. 400,000  
   D. 700,000

17. What is not a type of Buckskin or Dun colored horse?  
   A. grulla  
   B. red Dun  
   C. gold Dun  
   D. brindle Dun

18. Which of the following does not disqualify a horse from being registered with the International Buckskin Horse Association?  
   A. albino characteristics  
   B. palominos with Dorsal Stripes  
   C. chestnut Body  
   D. roan Hairs

19. American Paint Horses cannot be registered if they have lineage from what registry?  
   A. AQHA  
   B. AMHA  
   C. APHA  
   D. Jockey Club

20. When was the Jockey Club Formed?  
   A. 1894  
   B. 1898  
   C. 1884  
   D. 1876

21. A Trakehner is a type of what kind of horse?  
   A. gaited  
   B. stock  
   C. sport  
   D. draft

22. What breeds are allowed to compete in Dressage?  
   A. warmblood  
   B. any  
   C. Thoroughbred  
   D. Trakehner

23. In what year was the United States Polo Association formed?  
   A. 1895  
   B. 1880  
   C. 1890  
   D. 1891
24. What is **not** a type of insurance coverage for horses?
   A. Loss of Use
   B. Major Medical
   C. Mortality
   D. **Workers Comp**

25. Which is **not** a type of Breeding Contract?
   A. *mare sharing*
   B. stallion service contract
   C. goal sharing agreement
   D. *mare lease*

26. What is **not** an important criteria to consider when selecting bedding?
   A. ease of handling
   B. availability and price
   C. absorption
   D. **aesthetic qualities**

27. Which is **not** a highly flammable or combustible material used in keeping horses?
   A. shavings
   B. hay
   C. **blankets**
   D. feed

28. Which type of use is Board Fencing **not** ideal for?
   A. *mares and Foals*
   B. stallion Fencing
   C. show and Sale Horse Paddocks
   D. arenas

29. Correctly composting manure will:
   A. kill fly eggs
   B. kill weed seeds
   C. kill larvae
   D. **all of the above**

30. What is the function of the broad ligament?
   A. holds the scapula to the vertebral column
   B. it is part of the bowstring effect
   C. **suspends the uterus within the body cavity**
   D. attaches the sacrum to the pelvis

31. What are Type IIB muscle fibers used for?
   A. peed at longer distances
   B. **short and very fast bursts of energy**
   C. endurance
   D. trail riding
32. How long is the spermatogenic cycle in a stallion?
   A. 49-56 days (7-8 weeks)
   B. 35 days (5 weeks)
   C. 64 days (9 weeks)
   D. 70 days (10 weeks)

33. When is the mare in anestrus?
   A. during the winter or shorter daylight hours
   B. during the summer or longer daylight hours
   C. during an equinox or when light and dark are the same length
   D. during show season

34. What portion of the hoof should never directly bear weight?
   A. frog
   B. sole
   C. hoof wall
   D. laminae

35. Horses of which coat color are more commonly prone to melanomas?
   A. Cremello horses
   B. Grey horses
   C. Perlino horses
   D. Arabians

36. How many minutes does one chukker last?
   A. 5.3 minutes
   B. 9 minutes
   C. 7.5 minutes
   D. 15 minutes

37. Another name for septicemia is:
   A. blood poisoning
   B. urinary Tract Infection
   C. heaves
   D. pneumonia

38. What portion of the hoof does an egg bar shoe support?
   A. quarter
   B. toe
   C. heel
   D. wall

39. The process of desensitization of a foal is known as what?
   A. natural horsemanship
   B. imprint training
   C. normal training
   D. rational training
40. Hyperthermia is a term used to indicate what condition of a horse?
   A. freezing
   B. getting used to a new climate
   C. overheating
   D. exhaustion

41. Moon blindness is also called:
   A. equine periodic ophthalmia
   B. cataract
   C. blindness
   D. glass-eyes

42. What does corpus albicans refer to?
   A. the same as corpus luteum
   B. the space left by the ovulated egg that is filled with blood
   C. a degenerating corpus luteum
   D. a pre-ovulatory egg

43. The most important muscle responsible for respiration is:
   A. diaphragm
   B. intercostal muscles
   C. lungs
   D. abdominal muscles

44. Which paint coat color is associated with the genetic disease Megacolon?
   A. Frame
   B. Sabino
   C. Splashed White
   D. Tobiano

45. How long ago was the first horse domesticated by man?
   A. 25,000 years ago
   B. 18,000 years ago
   C. 11,000 years ago
   D. 6,000 years ago

46. Which of the following is not a respiratory disorder?
   A. Exercise Induced Pulmonary Haemorrhage (EIPH)
   B. Equine Influenza
   C. Chronic Obstructive Pulmonary Disease (COPD)
   D. Hyperkalemic Periodic Paralysis (HYPP)

47. CP is an abbreviation for:
   A. Crude Protein
   B. Crude Phosphorus
   C. Coarse Protein
   D. Conjugated Protein
48. What is the name of the substance consumed by a foal that can act as a laxative to eliminate the meconium?
   A. Iodine
   B. Streptomycin
   C. Colostrum
   D. Immunoglobulins

49. What is the diploid number of chromosomes of Equus Asinus?
   A. 66
   B. 64
   C. 62
   D. 60

50. Which form of evolved horse is described by the following: 3 toes touching the ground, fourth toe is reduced to a splint, a browsing animal, and the size of a miniature horse.
   A. Eohippus
   B. Mesohippus
   C. Merychippus
   D. Pliohippus