

NAME: _____

PARTICIPANT NUMBER: _____

2009 Senior Hippology Exam KEY

Carefully read each of the following questions, and enter the correct answer on your scantron sheet. **Please completely fill in the space of your preferred answer on your scantron and circle your answer on this exam using a No. 2 pencil.** Please make sure YOUR NAME and PARTICIPANT NUMBER are bubbled in correctly on your scantron and written on this exam. Good luck!

EXAM I

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

7. **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

8. **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

9. **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

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

11. **Which is a trace nutrient?**
 - a. Protein
 - b. Calcium
 - c. **Iodine** (Evans, 231)
 - d. Magnesium

12. Which bone in the leg rotates in a horse suffering from founder?

- a. Navicular bone
- b. Short Pastern bone
- c. Coffin bone HIH 640-1
- d. Cannon bone

13. Which gait has the fewest beats?

- a. Walk
- b. Canter (Evans, 176)
- c. Gallop
- d. Running Walk

14. What is the most important thing to consider in horse selection?

- a. Breed
- b. Color
- c. Conformation
- d. Use/purpose (Evans, 132)

15. 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

16. Which involves inflammation of the growth plate?

- a. Carpalitis
- b. Arthritis
- c. Epiphysitis (Evans, 163)
- d. Metritis

17. What is the primary sign of iron deficiency?

- a. Colic
- b. Weight loss
- c. Anemia (Evans, 233)
- d. Depressed immune system

18. Which term is associated with colic?

- a. Volvulus (Dict. 285)
- b. Vitreous
- c. Viscous
- d. Vitiglio

19. 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

20. What hormone induces parturition?

- a. Progesterone
- b. Estrogen
- c. Parturition hormone
- d. Oxytocin

21. What structure produces Pregnant Mare's Serum Gonadotropin (PMSG)?

- a. Endometrial cups (Evans, 345)
- b. Corpus luteum
- c. Corpus hemorrhagicum
- d. Myometrial tissue

22. What horse disease is caused by the bacteria *Streptococcus equi*?

- a. Strangles HIH 615-1
- b. Equine viral arteritis
- c. Influenza
- d. Encephalomyelitis

23. 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)

24. What is used to measure the concentration of antibody in the horse's system?

- a. Vaccine
- b. Titer (Dict. 269)
- c. Hematocrit
- d. Antigen

25. Which term describes a gait that is short, quick, high and choppy?

- a. Rolling
- b. Snappy
- c. Rack
- d. Trappy (Evans, 181)

26. 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

27. The horse's stomach makes up what percent of its digestive tract?

- a. 8% HIH 710-2
- b. 15%
- c. 22%
- d. 29%

28. Who ensures that a race meeting is conducted according to the rules?

- a. Judge
- b. Jockeys
- c. Track owner
- d. Steward (Dict. 255)

29. Which is a skin condition?

- a. Seborrhea (Dict. 240)
- b. Seedy toe
- c. Scalping
- d. Polypuria

30. Which nutrient is necessary for health, but can be toxic if overfed?

- a. Vitamin B
- b. Vitamin C
- c. Calcium
- d. Selenium (Dict. 24)

31. Which is also known as recurrent uveitis?

- a. Moon blindness (Dict. 230)
- b. Sun blindness
- c. Ictheria
- d. Uveoloma

32. In the respiratory system, the alveoli are...

- a. The functional units of the lung where gas exchange usually occurs. (HIH 810-1)
- b. Blood vessels
- c. The functional unit of the trachea.
- d. Transitional cells that hold a reserve amount of oxygen so the lungs never run out.

- 33. Which part of the horse's body is most commonly used to determine age in a horse?**
- a. Skin/coat
 - b. Back legs
 - c. Teeth (HIH 240-1)
 - d. Length of tail and mane
- 34. Which breed of horse originated in colonial Virginia and Carolina's in the early 1600s?**
- a. Arabian Horse
 - b. Quarter Horse (HIH 1688-1)
 - c. Saddlebred
 - d. Standardbred
- 35. What condition may be caused by bruising the top of the head?**
- a. Fistula
 - b. Splint
 - c. Pituitary tumor
 - d. Poll evil (Dict. 217)
- 36. 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
- 37. What is the most commonly used bit material?**
- a. Copper
 - b. Rubber
 - c. Stainless Steel (HIH 1100-10)
 - d. German Silver
- 38. 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)
- 39. How much do horses contribute annually to the economy?**
- a. 15 Billion (HIH 120-1)
 - b. 15 Million
 - c. 10 Million
 - d. 1 Billion

40. Which bit can act as either a curb or a snaffle?

- a. Tom Thumb
- b. Pelham (Dict. 207)
- c. Egg Butt
- d. Spade

41. 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

42. How many pairs of chromosomes does the horse have?

- a. 32 (HIH 1020-1)
- b. 26
- c. 24
- d. 12

43. Which parasite is 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

44. 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

45. Which is an example of a ginglymus joint?

- a. Atlanto-axial
- b. Jaw
- c. Shoulder
- d. Hock (Dict. 120)

46. What genetic disease is found in primarily in Arabian horses?

- a. HYPP
- b. SCID
- c. EIA
- d. OLWS

47. What temperature should collected semen be maintained at for immediate use?

- a. 90 degrees
- b. 95 degrees
- c. 100 degrees
- d. 105 degrees

48. What term refers to a disease that is constantly present in a geographic area?

- a. Contagious
- b. Infectious
- c. Endemic (Dict. 91)
- d. Empyema

49. 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

50. Septicemia is what type of infection?

- a. Joints
- b. Spinal cord
- c. Brain
- d. Blood (Evans 429)

EXAM II

51. What genotype changes a bay to a buckskin?

- a. *DD*
- b. *Dd*
- c. *CC*
- d. *Cc^{cr}* (Evans, 481)

52. 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)

53. What is semen morphology?

- a. Activity level of sperm cells
- b. Concentration of sperm cells
- c. Shape of sperm cells
- d. Volume of semen

54. Which color dominance statement is correct?

- a. Bay dominates black (Evans, 479)
- b. Chestnut dominates bay
- c. Black dominates gray
- d. Brown dominates bay

55. 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)

56. Which is an inflammatory disease of the lungs?

- a. Strangles
- b. Influenza
- c. Pneumonia (Evans, 597)
- d. Encephalomyelitis

57. Where would a keratoma be found?

- a. Eye
- b. Nose
- c. Hoof (Dict. 161)
- d. Inside hind leg

58. Which can be treated with an anti-toxin?

- a. Influenza
- b. Equine Viral Arteritis
- c. Equine Encephalomyelitis
- d. Tetanus (Evans, 601)

59. A farrier tool used to cut off excess hoof growth is a?

- a. Rasp
- b. Clincher
- c. Nippers (Dict. 190)
- d. Clippers

60. What type of organism causes Potomac Horse Fever?

- a. Virus
- b. Bacteria
- c. Prion
- d. Rickettsia (HIH, 650-1)

61. What is defined as “any deviation in structure that interferes with the horses intended use or performance”?

- a. Conformation
- b. Blemishes
- c. Under-evaluation
- d. **Unsoundness (HIH 230-1)**

62. What country is the origin of the Exmoor pony?

- a. Germany
- b. Ireland
- c. Wales
- d. **England (HIH 157B-1)**

63. What deviation in travel is associated with horses that toe-in?

- a. Winging
- b. **Paddling (HIH 230-5)**
- c. Ropewalking
- d. Wobbling

64. 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

65. What parasite causes itching around the rectum?

- a. Strongyles
- b. Ascarids
- c. Strongyloides
- d. **Pinworms (HIH 430-2)**

66. Which parasite affects the liver?

- a. **Strongyles (HIH 430-6)**
- b. Bots
- c. Strongyloides
- d. Pinworms

67. Cushing’s disease is a tumor of what?

- a. Adrenal gland
- b. Thyroid gland
- c. Salivary gland
- d. **Pituitary gland (HIH 450-5)**

68. Which can cause laminitis?

- a. Metabolic disease
- b. Overwork
- c. Excessive feed
- d. All of the above (HIH 455-1)

69. Which is an ossification of the lateral cartilage?

- a. Ringbone
- b. Sidebone (HIH 455-5)
- c. Elbow boil
- d. Shoe boil

70. 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

71. What type of bacteria causes thrush?

- a. Aerobic
- b. Anaerobic (HIH 540-1)
- c. Streptococcus
- d. Staphylococcus

72. Which disease is most likely to cause abortions?

- a. Rhinopneumonitis (HIH 610-1)
- b. Equine influenza
- c. Potomac horse fever
- d. West Nile virus

73. 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

74. 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

75. 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

76. 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)

77. 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

78. Which class of horse has the highest nutritional needs?

- a. Working
- b. Idle
- c. Growing (HIH 710-3)
- d. Producing

79. 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

80. What forage may cause agalactia in mares?

- a. Alfalfa
- b. Clover
- c. Fescue (HIH 730-5)
- d. Orchardgrass

81. 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

82. Which is a legume?

- a. Timothy
- b. Fescue
- c. Birdsfoot trefoil (HIH 760-2)
- d. Bahia

83. Which has the highest percent protein?

- a. Barley
- b. Corn
- c. Wheat
- d. Soybean meal (HIH 760-8)

84. Which disease can be caused by excess carbohydrate intake?

- a. Enteroliths
- b. Rhabdomyolysis (HIH 770-3)
- c. Developmental Orthopedic disease
- d. Anemia

85. Where is oxygen bound on the red blood cell?

- a. Nucleus
- b. Hemoglobin (HIH 810-1)
- c. Endocrine
- d. Myoglobin

86. The diaphragm and intercostal muscles are most active during:

- a. Inspiration (HIH 810-1)
- b. Expiration
- c. Both
- d. Neither

87. 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

88. Which mineral is part of Vitamin B12?

- a. Cobalt (Lewis, 39)
- b. Iron
- c. Magnesium
- d. Fluoride

- 89. What is the effect of increased maturity on hay quality?**
- Increases nutrients
 - Increases fiber (Lewis, 68)**
 - Increases digestibility
 - Increases palatability
- 90. Which processing method has a significant increase in starch digestion of feed?**
- Grinding (Lewis, 77)**
 - Rolling
 - Cracking
 - Crushed
- 91. What term describes the time when a mare is not cycling?**
- Anestrus (Lewis, 235)**
 - Diestrus
 - Monestrus
 - Polyestrus
- 92. When should mares be vaccinated to maximize the amount of antibodies in their colostrum?**
- 2 weeks pre-foaling
 - 3 weeks pre-foaling
 - 4 weeks pre-foaling (Lewis,**
 - 6 weeks pre-foaling
- 93. Which is related to increased occurrence of Developmental Orthopedic Disease in foals?**
- Lack of energy intake
 - Excessive energy intake (Lewis, 286)**
 - Excessive protein intake
 - Lack of concentrate intake
- 94. Which toxic chemical can horses be exposed to through sawdust or shavings?**
- Cyanide
 - Helium
 - Hydrochloric acid
 - Jugalone (Lewis, 322)**
- 95. What feedstuff is most likely to be contaminated with the mycotoxin Fumonisin?**
- Corn (Lewis, 349)**
 - Oats
 - Barley
 - Rye

96. What common livestock feedstuff is toxic to horses?

- a. Ionophores (Lewis, 361)
- b. Silage
- c. Round hay bales
- d. Haylage

97. What is coprophagia?

- a. Eating of wood
- b. Eating of stones
- c. Eating of bedding
- d. Eating of feces (Lewis, 374)

98. Inflammation of what tissue is known as a curb?

- a. Flexor tendon
- b. Collateral ligament
- c. Cruciate ligament
- d. Plantar ligament (Lewis, 386)

99. What hormone causes lysis of the corpus luteum?

- a. Progesterone
- b. Estrogen
- c. Prostaglandin (Lewis, 400)
- d. Oxytocin

100. Which schedule of reinforcements is used once a behavior is learned?

- a. Continuous
- b. Extinction
- c. Acquisition
- d. Intermittent (Evans, 668)

Congratulations! You have completed the 2009 Senior Hippology written exam. **Please double check all your answers** and MAKE SURE YOUR NAME and PARTICIPANT NUMBER ARE BUBBLED IN CORRECTLY.