One-On-One

1. C1  Q. What is the name for the famous Thoroughbred horse that was referred to as the original “Big Red”?
   A. Man-O-War
   S. Evans p. 22  200/2

2. C2  Q. What slang term refers to a racing stable employee who walks a hot horse after a race or workout?
   A. Hot walker
   S. DET p. 144  1070/3

3. C3  Q. What term refers to the right side of the horse?
   A. Off side or far side
   S. DET p. 194  400/2

4. C4  Q. Which gait is commonly referred to as the “plantation gait”?
   A. Running walk
   S. Evans p. 178  640/2
5. C1 Q. Healthy horses usually have what body condition score?
   A. 4 to 6 (accept anything within that range)
   S. HIH 780-1 800/2

6. C2 Q. What type of equipment is described as a cross between a cavesson and a figure eight noseband?
   A. Flash noseband
   S. DET p. 109 1000/3

7. C3 Q. What is the result of breeding a donkey and a stallion?
   A. Hinny
   S. Griffiths p. 22 500/2

8. C4 Q. What current breed was formerly known as the “Palouse horse”?
   A. Appaloosa
   S. HIH 152B-1 200/2
9. C1  Q. In general what does the prefix “hepato” indicate?
   A. Condition related to the liver
   S. DET p. 138  430/3

10. C2  Q. What is the common term for the behavior referred to as dominance hierarchy?
    A. Pecking order
    S. Evans p. 677  910/2

11. C3  Q. A grain that has been processed by rolling the kernels between corrugated rollers would be described as what type of processing?
    A. Crimped or crimping
    S. Lewis p. 386  790/2

12. C4  Q. What type of knot forms the eye of the lariat that the rope passes through to form a loop?
    A. Honda
    S. DET p. 141  1000/3

End One-On-One
2013 NC State 4-H Horse Bowl Contest
Round 1

Begin Open Questions

13. Q. What type of Western saddle is being described? It usually has no horn; its most notable feature is the high “thigh rolls” located near the front of the saddle and it is often used for trail riding.

   A. Australian saddle
   
   S. YLM BEG 108-2L    1000/2

14. Q. The withers, back, coupling and croup are collectively referred to by what conformation term?

   A. Top line
   
   S. YLM ADV 323-2L    600/2

Toss Up – Bonus Attached

15. Q. Identify two types of teeth that would be present at birth or erupt within the first 2 weeks of life.

   A. Deciduous central incisors and premolars (must specify central incisors but do not need to include deciduous in answer)
   
   S. YLM ADV 304-1L    435/3

Bonus Question

16. Q. Identify two general physiological processes in the horse that are affected by the length of daylight.

   A. Hair coat; female reproduction (estrus cycles); male reproduction (testosterone production, sperm production)
   
   S. YLM ADV 304-2L; YLM ADV 327-2L; HIH 910-8    400/3
Resume Open Questions

17. Q. What term refers to the feces of a foal and is described as a yellow pasty material indicating that the meconium has been passed?

   A. Milk feces

   S. HIH 950-2  500/3

18. Q. What breed of horse is described as a combination of any breeds that are not 100% hot-blood or 100% cold-blood?

   A. Warmblood

   S. HIH 151B-1  200/3

19. Q. You are an equine construction specialist and are preparing a site for a new barn. In regards to topography, what would be your recommendation for grading the soil to facilitate proper drainage and prevent erosion?

   A. Slope of 2 to 6 percent

   S. HIH 320-2  920/2

Toss Up – Bonus Attached

20. Q. The ingestion of which two plants would result in the condition nigropallidal encephalomalacia?

   A. Yellow Star Thistle (Centaurea solstitialis) and Russian Knapweed (Centaurea repens)

   S. Lewis p. 318  770/3
2013 NC State 4-H Horse Bowl Contest
Round 1

Bonus Question

21. Q. A spavin is a disease of the hock joint. What are the four different types of spavins?

   A. Blind spavin (occult spavin)  Bone spavin (true spavin or jack spavin)
   Blood spavin      Bog spavin

   S. Lewis p. 404  810/3

Resume Open Questions

22. Q. What is the name of the person who looks after the horses on a trail ride?

   A. Wrangler

   S. DET p. 295  1070/2

23. Q. Which current breed of horse was previously known as a Golden Isabella?

   A. Palomino

   S. Evans p. 50  200/3

24. Q. Which internal parasite larvae cause the skin lesions known as “summer sores”?

   A. Stomach worms (Habronema)

   S. Griffiths p. 190  835/2
2013 NC State 4-H Horse Bowl Contest
Round 1

25. Q. Describe a four-in-hand hitch.
   A. Two pairs with one pair in front of the other
   S. DET p. 114 1050/2

Toss Up – Bonus Attached

26. Q. What are the three basic types of forward seat saddles?
   A. All purpose, close contact (also accept jumping) and dressage
   S. HIH 1100-1 1100/3

Bonus Question

27. Q. Identify four general reasons why a horse may refuse a feed.
   A. Illness or disease  Overfeeding
      Insufficient water  Something is wrong with the feed
      Dental problems  Sore tongue or mouth
      Not familiar with the food  When the horse is stressed
   S. HIH 735-2; Lewis p. 151 700/3

Resume Open Questions

28. Q. Which nerve is responsible for motor control of the eyelid, ear and facial muscles?
   A. Facial nerve
   S. Kainer plate 78 420/3
29. Q. You are completing a cross country race and are approaching a brush fence with a white flag on the right side of the obstacle. What does this indicate?

A. You are approaching the fence from the wrong direction (the white flag should be on the left side of the obstacle)

S. DET p. 293 1075/2

30. Q. Lethal white foal syndrome is a genetic lethal associated with which specific color pattern?

A. Frame overo (must specify “frame” overo)

S. Griffiths p. 49 550/3

31. Q. What breed is a result of crossing an Arabian and American Saddlebred horse?

A. National Show Horse

S. DET p. 188 200/2

Last Question of the Round

32. Q. In regards to evolution, which ancestor of the horse was the first to have the 2 side toes transformed into splint bones?

A. Pliohippus

S. Griffiths p. 9 100/3
2013 NC State 4-H Horse Bowl Contest
Round 2

One-On-One

1. C1  Q. What term describes a splotch of dark color on a base coat color?
   A. “Blood mark”
   S. Griffiths p. 310/3

2. C2  Q. What anatomical structure receives oxygenated blood from the left gastric artery?
   A. Stomach
   S. Kainer plate 60

3. C3  Q. What is the second race in the Triple Crown for 3 year old Thoroughbreds?
   A. Preakness
   S. DET p. 219

4. C4  Q. What canine-related phrase is a slang term for a horse that is weak in its coupling and shallow in the flank?
   A. Hound-gutted
   S. Evans p. 152
5. C1  Q. Winging-in is associated with what conformation defect?
   A. Splay footed (toed-out)
   S. Evans p. 151  600/2

6. C2  Q. Vesicular stomatitis is a viral disease that results in the formation of vesicles in the mouth and on the lips, hooves and teats. What is a vesicle?
   A. Fluid filled sac (blister)
   S. HIH 685-1; DET p. 282  860/3

7. C3  Q. Green forage is an important source of which essential vitamin?
   A. Vitamin A
   S. Lewis p. 46  740/2

8. C4  Q. Which type of bit may be used as a snaffle or a curb and is commonly used on heavy harness or plow horses?
   A. Liverpool bit
   S. DET p. 170  1000/2
2013 NC State 4-H Horse Bowl Contest
Round 2

9. C1  Q. In general, what type of fencing is considered to have the longest life expectancy?
   
   A. PVC (vinyl)
   
   S. Evans p. 768  920/2

10. C2  Q. A thin protrusion of metal on the ground surface of the toe of a racing plate is known as what shoe alteration?

   A. Toe grab (toe grip)
   
   S. DET p. 270  900/2

11. C3  Q. Which endocrine gland is responsible for the maintenance of calcium levels in the blood?

   A. Parathyroid (also accept thyroid due to the hormone calcitonin)
   
   S. DET p. 204  490/3

12. C4  Q. Who is the foundation sire for the American Albino?

   A. Old King
   
   S. Evans p. 23  200/3

End One-On-One
2013 NC State 4-H Horse Bowl Contest
Round 2

Begin Open Questions

13. Q. For what length of time are sperm viable in the reproductive tract of the mare?

   A. 48 to 72 hours (accept anything within that range)

   S. Evans p. 396 520/3

14. Q. What sensory deficit is exhibited in Belgian horses with the genetic condition aniridia?

   A. Sight (also accept blindness although aniridia does not always cause blindness)

   S. Evans p. 516 530/3

Toss Up – Bonus Attached

15. Q. Identify two other terms for the blemish commonly referred to as mud fever.

   A. Grease, grease heel, scratches, cracked heel

   S. Evans p. 167; DET p. 183 620/2
Bonus Question

16. Q. Describe **three** methods that can be used to help establish a patent or effective airway for a foal that is not breathing after delivery.

   A. Clear and remove fetal membranes from over nostrils
      Place foal on sternum (head outstretched with rear end elevated)
      Gently remove fluids from nostrils with fingers
      Tickle inside of nose to induce sneezing
      Suction fluids from mouth using a bulb syringe
      Rub with towels

   S. Lewis p. 251 500/3

Resume Open Questions

17. Q. In general, you should graze horses when forages are 6-8 inches high. What type of forage is an exception to this rule?

   A. Kentucky bluegrass or White clover (ladino) (can be grazed at 4 inches)

   S. HIH 735-2 780/2

18. Q. You are the conditioning veterinarian judge for an endurance trail ride. What condition would these vital signs indicate? Temperature 102 degrees, heart rate 80 beats/minute and respirations 100 breaths per minute.

   A. Inversion (respiratory rate higher than the pulse rate)

   S. YLM BEG 115-1L 800/2
19. Q. A caudal epidural anesthetic would result in numbness in what areas of the horse?

A. Hind legs (also accept pelvic and groin regions)

S. DET p. 51 805/2

Toss Up – Bonus Attached

20. Q. Other than salt, identify two other minerals that would be found in trace mineralized salt.

A. Manganese, iron, cobalt, copper, iodine or zinc

S. YLM ADV 302-2L 750/3

Bonus Question

21. Q. What specific color would be the result of a single dilution of the following three colors with the dominant dun dilution gene… black, bay and chestnut?

A. Black – grullo
   Bay – zebra dun
   Chestnut – Red dun (Claybank dun)

S. HIH 1040-2 550/3

Resume Open Questions

22. Q. What is the correct category for the behavior described as contagious or infectious behavior?

A. Allelomimetic

S. Evans p. 676 910/2
23. Q. What type of bar shoe would be used for a horse with navicular disease?
   A. Egg bar (do not accept heart bar)
   S. HIH 515-4 900/3

24. Q. What is the common term for the disease Borreliosis?
   A. Lyme Disease
   S. HIH 655-1 800/3

25. Q. What mineral is essential for the synthesis of vitamin B12?
   A. Cobalt
   S. Griffiths p. 137 750/3

Toss Up – Bonus Attached

26. Q. Which two parasites are most common in foals up to 6 months old?
   A. Roundworms (parascaris equorum)
   Threadworms (strongyloides westeri)
   S. HIH 950-9 835/3

Bonus Question

27. Q. From distal to proximal identify the three parts of the small intestine.
   A. Ileum, jejunum and duodenum
   S. Kainer plate 51 430/3
Resume Open Questions

28. Q. Plant poisoning from consumption of Milkweed would be treated as what type of sudden death poisoning?
   A. Cardiac (cardiac glycoside) sudden death poisoning

   S. Lewis p. 334    770/3

29. Q. What term refers to the team of horses behind the lead team in an 8-horse hitch?
   A. Point team

   S. DET p. 215     1050/2

30. Q. Your horse sustained a laceration and has bright red blood spurting from the wound. What would be your initial action to control the bleeding?
   A. Direct pressure to the wound

   S. HIH 440-2     860-2

31. Q. Which farrier tool would be used to correct a flare?
   A. Rasp

   S. HIH 530-2     900/2
Last Question of the Round

32. Q. What breed was developed by the east coast Indians?
   
   A. Chickasaw

   S. DET p. 55  200/2
One-On-One

1. C1  Q. What type of joint is an enarthrosis?
   A. Ball and socket
   S. Evans p. 688 410/3

2. C2  Q. What term refers to the 7 ½ or 8 minute time period in a polo match?
   A. Chukka (also accept chukker)
   S. DET p. 56 1070/3

3. C3  Q. In general, what does the prefix “cysto” refer to?
   A. Bladder
   S. DET p. 76 470/3

4. C4  Q. Which type of pack saddle is rigged for a double cinch?
   A. Crossbuck (sawbuck)
   S. HIH 1125-1 1000/2
5. C1  Q. What type of shoe would be a good choice for a horse that needs temporary shoe protection until the hooves can grow out enough to handle nailing a shoe in place?

A. Glue-on shoe

S. HIH 515-5 900/3

6. C2  Q. What is the scientific name for the common horse bot?

A. Gastrophilus intestinalis

S. HIH 430-3 835/3

7. C3  Q. Blood is pulled from the peripheral circulation to the internal vital organs in a horse with shock. How would this physiological process affect the capillary refill time?

A. Delayed or slower capillary refill

S. Griffiths p. 163 800/3

8. C4  Q. Which type of melanin controls the expression of red and yellow pigment?

A. Pheomelanin

S. Griffiths p. 93 550/3
9. C1  Q. There are 5 walk gaits in a dressage test. Which of these would have a footfall pattern where the hind feet touch the ground behind the footprints of the forefeet?

A. Collected walk

S. Evans p. 174  640/3

10. C2  Q. Identify one of the breeds that the Tennessee Walking Horse was developed from.

A. Standardbred, Morgan or Narragansett pacer

S. Evans p. 40  200/3

11. C3  Q. A feed containing 10% crude protein and 15% crude fiber would be appropriate for what type of horse?

A. Mature idle horse or horse with minimal work

S. HIH 745-5  700/2

12. C4  Q. Thrombocytes are commonly referred to as what type of blood cells?

A. Platelets

S. DET p. 214  440/3

End One-On-One
Begin Open Questions

13. Q. You do the math…How many furlongs is a 1 ½ mile race?
   A. 12 furlongs (1 furlong equals 1/8 mile)
   S. DET p. 116 1040/3

14. Q. What are you doing if you are fuzztail running?
   A. Herding and catching wild horses
   S. DET p. 116 1070/3

Toss Up – Bonus Attached

15. Q. Identify the three “rough stock” events at a rodeo.
   A. Saddle bronc riding, bareback riding and bull riding
   S. DET p. 237 1060/3

Bonus Question

16. Q. Identify three of the hormones produced by the anterior pituitary.
   A. Growth hormone (GH)   Adrenocortocotropin (ACTH)
     Luteinizing hormone (LH)   Follicle stimulating hormone (FSH)
     Thyrotropin (thyroid stimulating hormone, TSH)
     Prolactin
   S. Evans pp. 126-127 490/3
Resume Open Questions

17. Q. What term refers to the mounted horseman who rode on the outside of a stagecoach for protection from bandits?
   A. Outrider
   S. DET p. 198 100/3

18. Q. In general, what does the prefix “leuko” refer to?
   A. White blood cells
   S. DET p. 168 400/3

19. Q. What type of negative reinforcement would be demonstrated by a horse moving away from pressure to avoid a more severe pressure?
   A. Avoidance
   S. YLM ADV 320-2L 980/2

Toss Up – Bonus Attached

20. Q. (Two Part) In regards to maturity, what is the term that describes the optimal growth stage for harvesting legumes and what is the optimal growth stage for harvesting grasses?
   A. Legumes – bud or vegetative stage (just prior to when the legumes flower); Grasses – early or boot stage (when grasses begin to show heads through the sheath)
   S. Lewis p. 68 780/3
Bonus Question

21. Q. Premature separation of the placenta during parturition resulting in hypoxia is a known cause for neonatal maladjustment syndrome. Identify **three** terms used to describe these foal as they progress through the stages of this disorder.

   A. Wanderer, dummy, convulsive or barker foal

   S. HIH 950-8 500/4

Resume Open Questions

22. Q. The process that uses intense cold to destroy the pigments cells of the skin and that is used for identification of livestock is known as what procedure?

   A. Freeze branding

   S. Evans p. 809 920/3

23. Q. What is the **specific** location of the metatarsalphalangeal joint?

   A. Hind fetlock joint (must specify hind for correct answer)
   (may also accept hind ankle or hind ankle joint)

   S. Evans p. 689 410/3

24. Q. When looking at the feed tag for the concentrate you are currently feeding you notice the abbreviation GRAS. What does GRAS indicate?

   A. Generally Recognized as Safe (safe for animal consumption)

   S. Lewis p. 391 700/4
2013 NC State 4-H Horse Bowl Contest
Round 3

25. Q. During the past 6 months horses across the United States were more likely to ingest poisonous plants due to what predominant weather condition?

   A. Drought conditions

   S. Lewis p. 301 770/3

Toss Up – Bonus Attached

26. Q. (Two Part) What is the primary function of FSH in the mare and what is the primary function in the stallion?

   A. Mare – stimulates growth of follicles in the ovaries
   Stallion – stimulates spermatogenesis (sperm production) in the testes

   S. Lewis p. 390 490/3

Bonus Question

27. Q. Stainless steel is the most common material bits are made from. Identify four other materials bits are made from.

   A. German silver, solid nickel (or Never Rust), copper, aluminum, rubber, vulcanite or happy mouth

   S. HIH 1100-10 1000/3

Resume Open Questions

28. Q. What is the main physiological function of erythrocytes?

   A. Transport oxygen in the blood

   S. HIH 830-1 440/2
2013 NC State 4-H Horse Bowl Contest
Round 3

29. Q. What is the only draft horse breed recognized as originating in the United States?
   A. American Cream
   S. HIH 155B-1 200/3

30. Q. If hay is stored above stalls, the bales of hay should be at least how far from the outside walls to allow hot, moist air to escape?
   A. At least 12 inches
   S. HIH 320-9 920/3

31. Q. What is the common term for the external parasite of the tabanids species?
   A. Horse fly
   S. HIH 415-2 835/3

Last Question of the Round

32. Q. In general, in regards to the horse, what designates a fall?
   A. When both the shoulder and quarter (hip area) on the same side touch the ground
   S. DET p. 103 1070/3
2013 NC State 4-H Horse Bowl Contest  
Round 4

One-On-One

1. C1  Q. What color dilution is often referred to as type B albino?
   A. Perlino
   S. DET p.209 300/3

2. C2  Q. Touching the saddle with a free hand is referred to by the slang term “pulling leather” and is a disqualification in what rodeo event?
   A. Saddle bronc riding
   S. DET p. 222 1060/3

3. C3  Q. What term refers to the female side of the pedigree?
   A. Distaff side (also accept dam side)
   S. DET p. 82 220/3

4. C4  Q. What type of sudden death poisoning would be the result of ingestion of water hemlock?
   A. Alkaloid sudden death
   S. Lewis p. 334 770/3
5. C1  Q. What anatomical structure in the horse is described as a diverticulum of the auditory tube?
   A. Guttural pouch
   S. Kainer plate 46  400/3

6. C2  Q. What is the difference between a roached mane and a hogged mane?
   A. Hogged mane is clipped to a length of no more than 3 inches; Roached mane is clipped close to the skin (less than 3 inches)
   S. DET p. 141, 235  950/3

7. C3  Q. When fox hunting, what does the cry holloa indicate?
   A. The fox has been sighted
   S. DET p. 141  1080/3

8. C4  Q. In general, what does the suffix “itis” indicate?
   A. Inflammation
   S. DET p. 67, 118, 138 (multiple other pages)  400/3
9. C1 Q. What is unique in the horse in regards to respiratory frequency and stride frequency, especially at the gallop?

A. 1:1 ratio (respiratory rate equals number of strides)

S. YLM ADV 325-2L 980/3

10. C2 Q. What specific term refers to the prophylactic surgical procedure that would be used for a pregnant broodmare with pneumovagina?

A. Caslick’s

S. YLM INT 230-1L 510/3

11. C3 Q. What is the diploid number of chromosomes for a donkey?

A. 62 diploid chromosomes

S. Griffiths p. 20 550/3

12. C4 Q. What phase of the stride occurs when all 4 feet are off the ground?

A. Period of suspension

S. Griffiths p. 74 640/3

End One-On-One
Begin Open Questions

13. Q. What term refers to bursts of white on a gray coat color?
   A. Rosettes
   S. Griffiths p. 45 300/4

14. Q. What would be the general location of the manubrium and xiphoid process?
   A. Sternum
   S. Kainer plate 8 410/3

Toss Up – Bonus Attached

15. Q. Identify two specific types of parasites that would cause pruritis ani.
   A. Pinworms (oxyuris equi)
      Tail mange mite (also accept mange mite) (chorioptes equi)
      Biting louse (must specify biting louse) (damalinia equi)
   S. Evans p. 641 835/4

Bonus Question

16. Q. Identify three of the four breeds that the Paso Fino breed was developed from.
   A. Andalusian, Barb, Spanish Jennet and Friesian
   S. Evans p. 43 200/4
Resume Open Questions

17. Q. A broodmare whose foal is in a “flexed capri” position would need what problem corrected to enable normal vaginal delivery?

   A. Knees are bent, so the foal would need repositioned and the front legs straightened into normal position for delivery

   S. Evans p. 424 500/3

18. Q. What type of electric fence is considered to be safer because it is more visible and less injurious to the horse?

   A. Electric tape

   S. Evans p. 767 970/3

19. Q. What is the term for the Australian game on horseback that is based on polo and lacrosse?

   A. Polo crosse

   S. DET p. 217 1070/4

Toss Up – Bonus Attached

20. Q. Identify the three general types of clinchers or clinching tongs.

   A. Saddle horse, gooseneck and draft horse

   S. YLM BEG 116-2L 900/3
21. Q. Identify six of the macro-minerals required by the horse.

A. Calcium  Sodium
   Phosphorus  Chloride
   Potassium  Magnesium
   Sulfur

S. Griffiths p. 131  750/3

22. Q. In general, what does the prefix “desmo” indicate?

A. Ligament

S. DET p. 79  410/4

23. Q. What type of bit is non-allergic?

A. Happy Mouth

S. HIH 1100-10  1000/3

24. Q. There are 2 viruses that cause Rhinopneumonitis. Which of these can result in respiratory and neurologic symptoms as well as abortion in pregnant mares?

A. EHV-1 (Equine Herpes Virus 1)

S. HIH 610-2  850/3
25. Q. You do the math… If the cardiac output is 35 liters and the heart rate is 35 beats per minute…What is the stroke volume?

A. 1 liter

S. Evans p. 111 440/3

Toss Up – Bonus Attached

26. Q. In general, for successful ejaculation of the stallion, an artificial vagina must provide what two physical characteristics?

A. Must provide warmth and pressure

S. Evans p. 378 500/4

Bonus Question

27. Q. Your job at a breeding farm is management of the pregnant broodmares. Identify four management practices you follow in regards to herd management to prevent an abortion storm.

A. Isolate all new arrivals for at least 21 days
   Keep pregnant mares separated from weanlings and other horses
   Do not mix maiden mares with older mares
   Divide pregnant mares into small groups by the stage of pregnancy
   Keep mares in group until all in group have foaled
   If pregnant mares are moved off the farm and later return – do not reintroduce them into the original group
   If a foster mare is introduced do not place her in a group with other mares
   Maintain all pregnant mares on vaccination program

S. HIH 610-3 920/3
2013 NC State 4-H Horse Bowl Contest  
Round 4  

Resume Open Questions  

28. Q. What hormone is primarily responsible for diestrus?  
   A. Progesterone  
   S. Kainer plate 71 510/3  

29. Q. What is the common term for the tuber coxae?  
   A. Hip  
   S. Evans p. 687 410/3  

30. Q. Sidebones are a condition associated with ossification of the collateral (or lateral) cartilages. What term refers to the condition that occurs when the collateral cartilages become infected?  
   A. Quittor  
   S. HIH 455-5 810/4  

31. Q. Which contains more crude fiber – complete feeds or long stem hay?  
   A. Long stem hay  
   S. HIH 741-1 780/3  

Last Question of the Round  

32. Q. Identify two different medical terms for the condition commonly referred to as moon blindness?  
   A. Periodic opthalmia, recurrent uveitis  
   S. Evans p. 521 800/4
One-On-One

1. C1  Q. At what age are all of the permanent incisors in place?
   A. 4 ½ years
   S. Kainer plate 453/3

2. C2  Q. What **two** criteria determine the winner of an “against the clock” jumping competition?
   A. The rider with the fastest time and the fewest faults
   S. DET p. 4 1075/3

3. C3  Q. What breed is being described? Dun color with a dorsal stripe and black mane and tail. Breed that has survived since the Ice Age and originated in Mongolia.
   A. Asiatic Wild Horse (also accept Mongolian Wild Horse and Przewalski’s Horse)
   S. DET p. 16 200/4

4. C4  Q. Would the corium be considered to be part of the dermis or epidermis?
   A. Dermis
   S. Kainer plate 25 415/3
5. C1  Q. The breeding of a **sire** with a **daughter** would be an example of what **specific** type of breeding?

   A. Inbreeding (also accept close breeding) (do not accept linebreeding)

   S. HIH 1080-1  500/3

6. C2  Q. What **two** breeds were combined in the development of the Azteca?

   A. Andalusian and Quarter Horse

   S. DET p. 19  200/3

7. C3  Q. In general, what does the prefix “arthro” describe?

   A. Joints

   S. DET p. 15  410/3

8. C4  Q. Would a feed with a 2% or 5% crude fiber have a higher digestible energy?

   A. Feed with 2% crude fiber

   S. HIH 745-3  710/4
9. C1  Q. What does the abbreviation PSSM indicate?

A. Polysaccharide Storage Myopathy

S. HIH 460-4  800/4

10. C2  Q. You recently purchased a new stallion for your breeding program. The previous owner stated that the stallion had a respiratory illness accompanied by a high fever 30 days ago. What impact would this have on the stallion’s fertility?

A. Would expect a lower sperm count for 65 days after the illness

S. HIH 920-4  520/3

11. C3  Q. A “red bag delivery” is most commonly observed in mares that have been grazed on what type of pasture?

A. Fescue

S. HIH 940-4  780/3

12. C4  Q. You are the veterinarian on call and are examining a horse that sustained a laceration to the front lower leg sometime in the past 12 hours. There is no active bleeding from the wound. What would be the main reason to not suture this wound?

A. Suturing may increase the risk of infection due to elapsed time since injury (without the wound being properly cleaned)

S. HIH 440-3  800/3

End One-On-One
2013 NC State 4-H Horse Bowl Contest  
Round 5

Begin Open Questions

13.  Q. What is the purpose of a prophylactic medication?
    A. To prevent an illness or disease
    S. DET p. 221 805/3

14.  Q. What is the definitive host for Equine Protozoal Myeloencephalitis?
    A. Opossum
    S. HIH 670-1 800/3

Toss Up – Bonus Attached

15.  Q. Which three types of western saddles would have a horn that is tall?
    A. Barrel Racing, Roping and Cutting
    S. HIH 1100-5 1000/3

Bonus Question

16.  Q. The permanent upper and lower teeth are located in what three bones?
    A. Maxilla, mandible and incisive bone
    S. Kainer plate 41 435/3
Resume Open Questions

17. Q. Based on research studies for initial re-feeding of the starved horse, the best approach is feeding what?

   A. High quality alfalfa hay (frequent small amounts)

   S. HIH 785-3 700/4

18. Q. What is the slang term for the main office of a rodeo where excuses and grievances are aired?

   A. Crying room

   S. DET p. 74 1060/3

19. Q. What is the main purpose of the close contact saddle?

   A. Jumping

   S. HIH 1100-1 1000/2

Toss Up – Bonus Attached

20. Q. Which two glands empty into the small intestine at the major duodenal papilla?

   A. Liver (bile duct) and pancreas (pancreatic duct)

   S. Kainer plate51 490/4
2013 NC State 4-H Horse Bowl Contest
Round 5

Bonus Question

21. Q. Identify five advantages of maintaining horses on a well-managed pasture.

   A. Reduces required supplemental feed (hay and/or grain)
   Recycles nutrients from manure
   Exercise
   Reduces frequency of respiratory disease
   Maintains gastrointestinal health
   Aesthetically pleasing
   Increases grazing capacity
   Enhances water quality
   Socialization
   Decreases erosion

S. HIH 740-1 970/3

Resume Open Questions

22. Q. The orbatid mite is the intermediate host for which internal parasite?

   A. Tapeworm

   S. HIH 430-4 835/3

23. Q. What is the name for the radiopaque dye material given to a horse by mouth to outline the digestive tract on radiographs?

   A. Barium

   S. DET p. 23 805/3
2013 NC State 4-H Horse Bowl Contest
Round 5

24. Q. Horses with recurrence of urinary calculi may benefit from feeding a diet that has less of what specific mineral?

A. Calcium

S. Lewis p. 297  750/3

25. Q. What type of striding leg interference occurs when the toe of the forefoot strikes the hind leg at the pastern or fetlock?

A. Speedy cutting

S. Evans p. 179  640/3

Toss Up – Bonus Attached

26. Q. Which two criteria used to evaluate semen are not affected by the length of daylight or season of the year?

A. Morphology and motility

S. Evans p. 368  520/3

Bonus Question

27. Q. The genetic conditions atresia coli and lethal white foal syndrome are both fatal conditions due to an inability to eliminate waste products from the intestines. In regards to anatomy, how do each of these conditions differ as to why the intestine does not function normally?

A. Atresia coli – the lumen of the colon is not continuous and is described as severed
   Lethal white foal syndrome – intestine does not empty correctly due to absence of nerves responsible for peristalsis in the intestines

S. DET p. 17; HIH 1060-6  830/4
Resume Open Questions

28. Q. What is the slang term for a foal that is born with septicemia and is semi-comatose?

   A. Sleeper or sleeper foal

   S. Evans p. 429     840/3

29. Q. In what anatomical structure of the stallion are sperm stored and matured?

   A. Epididymis

   S. DET p. 97     480/3

30. Q. What is a jerk line?

   A. Single rein fastened to the brake handle of a carriage and run through the driver’s hand to the bit of the lead horse

   S. DET p. 157     1050/4

31. Q. What would be the estimated age of a horse when the Galvayne’s groove extends to the wearing surface of the corner upper incisor?

   A. 20 years

   S. HIH 240-4     435/3
2013 NC State 4-H Horse Bowl Contest
Round 5

Last Question of the Round

32. Q. Which external parasite usually feeds on the inside ear folds and may cause a horse to be head shy?

A. Black flies (“Buffalo gnats”)

S. HIH 415-2 835/3
One-On-One

1. C1  Q. What is the common name for the medication flunixin meglumine?
   A. Banamine
   S. HIH 640-2 805/4

2. C2  Q. In regards to physiology, why is the myometrium thicker around the left ventricle than it is around the other chambers of the heart?
   A. The muscle around the left ventricle is thicker and stronger because it must contract with enough force to pump blood throughout the body
   S. Evans p. 111 440/3

3. C3  Q. You are the manager at a Thoroughbred farm and will be breeding a 15.2 hand stallion to a 16.3 hand mare. What is your solution for dealing with the physical size difference?
   A. Mare’s hind legs can be placed in a shallow depression or stand the stud on a hill or raised area (only need to give one answer) (do not accept option of AI or embryo transfer as these are not permitted with Thoroughbreds)
   S. Evans p. 415 500/3

4. C4  Q. What term refers to supporting leg interference that results in an open wound?
   A. Striking
   S. Evans p. 179 640/3
5. C1  Q. What is the primary symptom of a horse that ingests wild onions?
   A. Anemia
   S. Lewis p. 331  770/3

6. C2  Q. What type of grass provides the highest yield of hay-crop forage each year in the southern United States?
   A. Bermuda grass
   S. Lewis p. 109  780/4

7. C3  Q. How quickly a horse’s heart rate decreases and returns to their resting heart rate is an indication of what?
   A. Fitness of the horse (accept any answer that indicates this)
   S. Lewis p. 206  980/3

8. C4  Q. What is the common term for prognathia?
   A. Monkey mouth (sow mouth)
   S. Lewis p. 396  600/4
9. C1  Q. What type of forage would be most appropriate for a horse with renal failure?

A. Grass forage (lower in protein, phosphorus and calcium)

S. Lewis p. 296 700/3

10. C2  Q. What physical characteristic is described by the term microphthalmia?

A. Small eye

S. Lewis p. 398 425/4

11. C3  Q. Evaluating a feed for aflatoxin-producing mold can be accomplished using ultraviolet light from what type of lamp?

A. Woods lamp

S. Lewis p. 408 790/4

12. C4  Q. What general term refers to a horse that eats unnatural substances such as wood, hair or dirt?

A. Pica

S. Lewis p. 400 910/3

End One-On-One
2013 NC State 4-H Horse Bowl Contest
Round 6

Begin Open Questions

13. Q. What glandular organ is located near the stomach and serves as a reservoir for red blood cells?
   A. Spleen
   S. Lewis p. 404 400/3

14. Q. What is the recommended width of a gate that would be wide enough for hay equipment?
   A. 16 feet
   S. Evans p. 771 920/3

Toss Up – Bonus Attached

15. Q. Identify two problems that may occur when hay is baled with a moisture content greater than 20 percent.
   A. Mold and heat (also spontaneous combustion)
   S. Lewis p. 65 780/3

Bonus Question

16. Q. Jugging is the practice of administering a large quantity of a concentrated solution into the jugular vein. Identify three general types of nutrients or substances that would be included in this solution.
   A. Amino acids, electrolytes, vitamins, glucose
   S. DET p. 158 805/4
Resume Open Questions

17. Q. You are spending the day with a farrier. The farrier has 4 shoes that look identical set aside for the horse he is shoeing. He would like you to hand him a front shoe. How will you know which is a front shoe?

   A. The front shoe would be more round (also accept wider at the heel)

   S. Evans p. 150 900/3

18. Q. In general, what does the suffix “emia” describe?

   A. In the blood

   S. Lewis p. 407 400/3

19. Q. What are doing if you are “drenching” a horse?

   A. Pouring a liquid medication down the throat from a bottle

   S. DET p. 85 805/3

Toss Up – Bonus Attached

20. Q. Identify two of the organs that the celiac artery and its arterial branches supply with oxygenated blood.

   A. Spleen, stomach and liver

   S. Kainer plate 60 440/4
2013 NC State 4-H Horse Bowl Contest  
Round 6

Bonus Question

21. Q. In regards to the **stallion**, identify **four** advantages for artificial insemination versus live cover breeding.

   A. Prevent spread of venereal disease
   
   Able to breed injured/crippled stallions that are unable to mount a mare
   
   Eliminates injury to stallion from nervous, aggressive or shy mares
   
   Able to breed more mares per season
   
   Able to impregnate a mare located far away by shipping semen

   S. Evans p. 376 500/4

Resume Open Questions

22. Q. You do the math… You are judging a reining class and have indicated a total maneuver score of **minus 1** and a total penalty score of **minus 3 ½**. What would be the **final score** for this competitor?

   A. Score of 65 ½ points

   S. HIH 183D-1 1010/3

23. Q. You are the on call veterinarian evaluating a horse with the following symptoms…Rapid and labored breathing, incoordination, dilated pupils, muscle tremors and dark cherry red mucous membranes. These symptoms would indicate what type of plant poisoning?

   A. Cyanide poisoning

   S. Lewis p. 336 770/4
24. Q. The most common cause of spontaneous abortion is placental or uterine infections. Prior to the current widespread use of ultrasound, what accounted for about 25% of abortions and was considered to be the second most common cause?

A. Twinning

S. Lewis p. 240 500/4

25. Q. What breed is being described… Noted for its speed and jumping ability although it can be stubborn. Able to withstand the severe weather in its country of origin which is Russia.

A. Akhal-Teke

S. DET p. 6 200/4

Toss Up – Bonus Attached

26. Q. In regards to biosecurity identify three ways to diminish the possibility of transferring infective agents with your boots.

A. Disinfect boots using a spray disinfectant
   Disposable boots or boot covers
   Disinfect boots with a boot dip
   Change boots (between farms, between clean and dirty areas, etc)

S. Griffiths p. 194 920/4
2013 NC State 4-H Horse Bowl Contest
Round 6

Bonus Question

27. Q. What color would be the result of the silver dapple gene on the following three colors…black, bay and chestnut?

A. Black – Blue silver or silver dapple
   Bay – Red silver
   Chestnut – Chestnut (silver gene only affects black areas)

S. HIH 1040-2 300/4

Resume Open Questions

28. Q. What is the scientific name for the stable fly?

A. Stomxys calcitrans

S. HIH 415-1 835/4

29. Q. When driving a horse and turning left…Which rein is the “bearing rein”?

A. Right rein (rein opposite the direction)

S. DET p. 25 1000/3

30. Q. In foxhunting, who hunts the hounds and is in charge of the kennels?

A. Huntsman

S. DET p. 145 1080/3
31. Q. In general, what does the suffix “oma” describe?
   
   A. Tumor (also accept cancer or neoplasm)
   
   S. DET p. 178, 190,240  400/4

Last Question of the Round

32. Q. The mating of imported draft stallions with native mares in Southern Pennsylvania produced what breed that eventually disappeared and never had a breed registry.
   
   A. Conestoga horse
   
   S. Evans p. 9  100/3
One-On-One

1. C1  Q. What is the correct term for the medication referred to by the slang term “Ace”?

   A. Acetyl promazine (acepromazine)

   S. DET p. 3          805/4

2. C2  Q. The Tennessee Walking Horse was crossed with what other breed to develop the American Walking Pony?

   A. Welsh Pony

   S. Evans p. 66       200/4

3. C3  Q. The Chadwick spring provides constant outward pressure on the bars of the foot and would be used for what conformation defect of the hoof?

   A. Contracted heels

   S. DET p. 53; Evans p. 750    900/3

4. C4  Q. In general, what type of muscling is preferred in all breeds… 1.) thick, bulging muscle with definition, or 2.) long, clean, well-defined muscle?

   A. Long, clean and well-defined

   S. HIH 220-8           600/3
5. C1  Q. What anatomic structure is responsible for increasing absorption in the small intestine and is described as tiny, finger-like projections?

A. Villi

S. DET p. 283 430/4

6. C2  Q. In what specific area of the uterus does the conceptus attach and the fetus develop in a normal horse pregnancy?

A. Uterine horn

S. Evans p. 340, 347 510/3

7. C3  Q. The alkaloid slaframine would result in what symptom in horses grazing red clover affected with black patch?

A. Excessive salivation (slobbers)

S. Lewis p. 108 780/4

8. C4  Q. Who is the foundation sire for the American Saddlebred Horse?

A. Denmark

S. Evans p. 38 200/3
9. C1  Q. What is the primary benefit of extruded feed?
   A. Improved digestibility
   S. HIH 745-1  790/3

10. C2  Q. Ovulation will usually occur within how many days after the discontinuation of treatment with Regumate?
    A. Approximately 12 days
    S. HIH 930-4  805/4

11. C3  Q. Would the parasympathetic or sympathetic nervous system be stimulated with the “fight or flight” instinct?
    A. Sympathetic
    S. Kainer plate 80  420/4

12. C4  Q. What is the correct term for a full turn on the haunches in dressage?
    A. Volte
    S. DET p. 284  1090/4

End One-On-One
Begin Open Questions

13. Q. What are the two functions of the turbinate bones?
   A. Warm, hydrate and filter inspired air (only need to give two answers)
   S. DET p. 276       410/4

14. Q. Which pony breed is referred to as the “living fossil”?
   A. Exmoor
   S. HIH 157B-1       200/4

Toss Up – Bonus Attached

15. Q. (Two Part) The diaphragm is the muscle that separates the thoracic and abdominal cavities. What serous membrane covers the abdominal surface of the diaphragm and what serous membrane covers the thoracic surface?
   A. Abdominal – peritoneum
      Thoracic – pleura
   S. Kainer plate 56       400/4

Bonus Question

16. Q. What are the four methods used to breed mares?
   A. Pasture breeding, hand breeding, artificial insemination and embryo transfer
   S. Lewis p. 237     500/4
2013 NC State 4-H Horse Bowl Contest
Round 7

Resume Open Questions

17. Q. Which two types of white spotting are described as rising up from the underline of the horse?
   
   A. Splashed white and sabino
   
   S. Evans pp. 492-493 300/4

18. Q. What type of knot is used on the end of a rope to keep it from unraveling?
   
   A. Crown knot
   
   S. DET p. 74 1000/3

19. Q. You do the math… You are feeding a weanling that weighs approximately 400 pounds. If you are feeding twice a day and need to feed a total of 1% of the body…How many pounds would you feed for the morning feeding?
   
   A. 2 pounds
   
   S. HIH 765-2 700/4

Toss Up – Bonus Attached

20. Q. Identify the three gaits of the Paso Fino beginning with the speed that is the fastest and ending with the speed which is slower and more collected.
   
   A. Paso largo, paso corto and paso fino
   
   S. Evans p. 178 640/4
2013 NC State 4-H Horse Bowl Contest
Round 7

Bonus Question

21. Q. Identify three breeds that originated in the United States and were developed from crossing other breeds with Canadian pacers.

A. Standardbred, American Saddlebred and Tennessee Walking Horse

S. Evans p. 28, 38, 40 200/4

Resume Open Questions

22. Q. What is the anatomical name for a natural passageway or opening in the body that blood vessels and nerves pass through?

A. Foramen (also accept foramina)

S. DET p. 111; Kainer plate 41 410/3

23. Q. Sprinting and galloping can produce an oxygen deficit within skeletal muscle and result in what type of metabolism?

A. Anaerobic

S. HIH 895-1 980/3

24. Q. What is the correct medical terminology for giving birth?

A. Parturition

S. DET p. 205 500/3
25. Q. For what specific equine competition would you have herd holders?
   
   A. Cutting
   
   S. DET p. 139  1070/4

**Toss Up – Bonus Attached**

26. Q. Which two breeds were crossed to develop the Americana?

   A. Shetland and Hackney Pony
   
   S. Evans p. 66  200/4

**Bonus Question**

27. Q. Identify two reasons why additional protein is not a desirable source of energy in the athletic horse.

   A. Produces excess body heat
      Increased water loss (due to increased sweating)
      Increased electrolyte deficit
      More expensive

   S. Lewis p. 196  760/4

**Resume Open Questions**

28. Q. English stagecoaches often were accompanied by a cockhorse that was ridden behind the coach. What was the purpose of the cockhorse?

   A. Hitched in front of the team when going up steep hills or heavy going

   S. DET p. 60  1050/4
2013 NC State 4-H Horse Bowl Contest
Round 7

29. Q. The heart, trachea and esophagus are contained in what **specific** area of the chest cavity?

   A. Mediastinum

   S. DET p. 178     400/4

30. Q. Cremello is a double dilution of what color?

   A. Chestnut

   S. HIH 1040-2     650/3

31. Q. Which farrier tool is used to cut hot metal?

   A. Hardy

   S. Evans p. 727    900/3

**Last Question of the Round**

32. Q. What breed’s characteristics include a rat tail?

   A. Appaloosa

   S. Evans p. 32     200/3
2013 NC State 4-H Horse Bowl Contest  
Round 8

One-On-One

1. C1  Q. What is the anatomical term for the hind cannon bone?

   A. Large metatarsal or third metatarsal (do not accept third or large metacarpal)

   S. Kainer plate 12 410/3

2. C2  Q. What does the term open bridle describe?

   A. A bridle without blinders or blinkers

   S. DET p.196 1000/3

3. C3  Q. At how many days after ovulation would the embryo be collected from a donor mare for nonsurgical embryo transfer?

   A. 6-8 days (accept anything within this range)

   S. Evans p. 411 500/4

4. C4  Q. What is the difference in the traditional grooming presentation of a Hackney Pony shown in a “harness” versus a “Hackney” class?

   A. Ponies are shown with a cob-tail in Hackney classes and a long tail in a harness class

   S. Evans p. 63 200/3
5. C1  Q. What is the common term for Enterotoxemia?

   A. Overeating disease

   S. Evans p. 305  840/4

6. C2  Q. For fire safety, a barn used for hay storage should be located at least how far from other buildings?

   A. At least 100 feet

   S. Evans p. 781  920/3

7. C3  Q. What type of parasite is only a problem for horses that are being grazed with ruminants?

   A. Hairworms (Trichostrongylus axei)

   S. Lewis p. 158  835/4

8. C4  Q. What is the country of origin for the New Forest Pony?

   A. England

   S. DET p.190  200/3
9. C1 Q. Would front or hind plates have “jar calks”?
   A. Front plates (are referred to as heel calks on hind plates)
   S. Evans p. 734 900/4

10. C2 Q. What does the slang term “owl head” describe?
    A. A horse that is difficult to train
    S. DET p. 199 980/4

11. C3 Q. When using the Y-Tex Corporation system for freeze branding, the alpha character is used to identify what?
    A. Breed of horse (or “E” if grade or unregistered horse)
    S. Evans p. 810 920/4

12. C4 Q. What is the scientific name for the type of bot fly that is associated with eggs that are black and deposited on the lips?
    A. Gastrophilus hemorrhoidalis
    S. Evans p. 634 835/3

End One-On-One
Begin Open Questions

13. Q. Common signs of ocular disease include color changes such as redness or cloudiness, increased tearing and blepharospasm. What is blepharospasm?

   A. Squinting or closing the eye (indicates pain)

   S. HIH 465-2 425/4

14. Q. You would collect prize money if the horses you bet on placed first and second in the order you predicted if you placed what type of wager?

   A. Exacta

   S. DET p. 100 1040/3

Toss Up – Bonus Attached

15. Q. What is the difference between hyperplasia and hypertrophy?

   A. Hyperplasia is an increase in the number of cells
   Hypertrophy is an increase in the size of the cells

   S. DET pp. 146-147 400/4

Bonus Question

16. Q. Give four observations that would indicate that a foal with diarrhea would require medical attention.

   A. Large amount of diarrhea  Diarrhea contains blood
     Decreased appetite  Fever
     Depression/laziness  Dehydration
     Large volume of water in diarrhea

   S. Lewis p. 259 830/4
Resume Open Questions

17. Q. What is the common term for alpha tocopherol?
   A. Vitamin E
   S. DET p. 7 740/4

18. Q. What do the initials NHSRA stand for?
   A. National High School Rodeo Association
   S. HIH 186D-2 230/3

19. Q. In general, what does the suffix “malacia” describe?
   A. Softening
   S. DET 56, 91, 197 400/4

Toss Up – Bonus Attached

20. Q. Identify two equine diseases that are caused by protozoa.
   A. Equine Piroplasmosis (Babesiosis)
      Equine Protozoal Myeloencephalitis (EPM)
      Giardia Infection (Giardiasis)
   S. Griffiths p. 174 800/4
Bonus Question

21. Q. (Four Part) In regards to balance, the angle or slope of the shoulder will directly influence the ratio of which two other areas. How are each of these areas altered if the shoulder is longer and more sloping? How do they change if the shoulder is shorter and straighter?

A. Length of back: Length of underline
   More slope = length of back is shorter
   Straighter = length of back is longer
Top line of neck: Bottom line of neck
   More slope = top line of neck is longer
   Straighter = top line of neck is shorter

S. HIH 220-5/6  600/4

Resume Open Questions

22. Q. Which pony breed has adapted to harsh winter weather with the growth of a cluster of short hairs on the top of the tail that is referred to as an “ice-tail” or “snow-chute”?

A. Exmoor Pony

S. HIH 157B-2  200/4

23. Q. In the zoological classification, what is the order the horse would be included in?

A. Perissodactyla

S. Griffiths p. 15  100/3
24. Q. Which bacterial disease is called “shaker foal syndrome” when it affects foals?
   A. Botulism
   S. Evans p. 603  830/4

25. Q. What term refers to an overhanging of the top lip?
   A. Elk lip
   S. DET p. 600/3

Toss Up – Bonus Attached

26. Q. Identify three areas on the horse where a hackamore bit would exert pressure.
   A. Nose, face, jaw, chin, poll, cheeks (do not accept mouth)
   S. HIH 1100-8  1000/3

Bonus Question

27. Q. Identify the three foundation sires for the Rangerbred Horse.
   A. Max, Leopard and Linden Tree
   S. Evans p. 58  200/4
2013 NC State 4-H Horse Bowl Contest
Round 8

Resume Open Questions

28. Q. Combined Immunodeficiency Disease and Epitheliogenesis imperfecta would be classified as what type of genetic lethal?
   
   A. Delayed lethal
   
   S. HIH 1060-4 550/4

29. Q. You do the math… A foal normally weighs 9-10% of the mare’s body weight. A foal that weighs 50 pounds would indicate that it’s dam weighs how much?
   
   A. 450-500 pounds (accept anything within that range)
   
   S. HIH 940-5 500/3

30. Q. Praziquantel and pyrantel pamoate are both effective for the control of tapeworms. How does the dosage of pyrantel pamoate need to be altered when treating tapeworms?
   
   A. Give twice the standard dose
   
   S. HIH 430-4 835/3

31. Q. What term refers to the discipline described as “gymnastics on horseback”?
   
   A. Vaulting
   
   S. HIH 185D-1 1010/3
Last Question of the Round

32. Q. What are the two types of balance to consider when trimming the hoof?

   A. Heel to toe (front to back) and medial/lateral (side to side)

   S. HIH 510-1 900/3
One-On-One

1. C1  Q. What is the correct term for the medication referred to by the abbreviation DMSO?
   
   A. Dimethyl sulfoxide
   
   S. DET p. 2  805/4

2. C2  Q. What is the common term for Lethal White Foal Syndrome?
   
   A. “Megacolon”
   
   S. Griffiths p. 98  550/3

3. C3  Q. What color describes a dun with black points and a black dorsal stripe?
   
   A. Coyote dun
   
   S. DET p. 71  300/4

4. C4  Q. What breed is being described…Sometimes used as a pack animal; dun color with black and silver mane and tail, eel stripe and zebra markings; resembles the wild horses of the Ice Age; country of origin is Norway.
   
   A. Fjord
   
   S. DET p. 108  200/3
5. C1  Q. Equine supplements that contain valerian root provide what affect?

   A. Calming effect, sedative effect, anti-spasmodic effect (only need to give one answer)

   S. HIH 742-3  700/4

6. C2  Q. What mineral imbalance results in the condition commonly referred to as “bob-tail disease”?

   A. Excess selenium (must designate excess for answer to be correct)

   S. Lewis p. 329  770/4

7. C3  Q. For an obese horse, weight loss should occur gradually over several months. What amount of weight loss in pounds or what change in the body condition score is recommended in one month?

   A. Approximately 50 pounds or one body condition score

   S. HIH 790-3  700/3

8. C4  Q. What type of parasite may result in coughing, fever and nasal discharge which is commonly referred to as a “summer cold” in foals?

   A. Roundworms (parascaris equorum)

   S. Lewis p. 157  835/4
9. C1  Q. In general, what does the term viscera describe?
   A. Internal organs
   S. DET p. 283 400/4

10. C2  Q. Which breed was developed by crossing the Thoroughbred and Irish Draft breeds?
   A. Irish Hunter
   S. DET p. 155 200/4

11. C3  Q. Horses that are stalled 24 hours a day are more likely to be deficient in which vitamin?
   A. Vitamin D
   S. HIH 730-1 740/3

12. C4  Q. Halitosis with an odor of garlic would be an indication of what specific mineral toxicity?
   A. Selenium
   S. Griffiths p. 142 770/4

End One-On-One
2013 NC State 4-H Horse Bowl Contest
Round 9

Begin Open Questions

13. Q. What omega 3 fatty acid source when added to the diet has recently been identified as providing a significant improvement in sweet itch or other allergic skin conditions?

   A. Flaxseed

   S. HIH 742-4    700/4

14. Q. What ligament connects the splint bone to the cannon bone?

   A. Interosseous ligament

   S. DET p. 154     410/4

Toss Up – Bonus Attached

15. Q. Identify two systemic fungal diseases that affect horses.

   A. Aspergillosis       Blastomycosis
   Coccidiomycosis       Hisoplasmosis

   S. Griffiths p. 173    800/4

Bonus Question

16. Q. Identify three of the five classifications of donkeys according to size.

   A. Miniature       Small Standard
   Standard          Large Standard
   Mammoth

   S. HIH 156B-1      200/4
Resume Open Questions

17. Q. What is considered to be the primary reservoir host for rabies in horses?
   
   A. Skunk

   S. HIH 680-1 820/3

18. Q. A mare that shows lack of interest to a stallion but is not aggressive toward the stallion would be given what estrus behavioral score?

   A. Score of 2

   S. HIH 9330-2 520/4

19. Q. Hay feeders should be placed at a height no higher than what part of the horse’s anatomy?

   A. Shoulder

   S. HIH 740-12 920/3

Toss Up – Bonus Attached

20. Q. Weakening of the broad ligaments can cause a downward tilting of the uterus and can predispose a mare to uterine infections and infertility. Other than injury or illness, identify two things that would contribute to the weakening of these ligaments

   A. Age of the mare, number of pregnancies the mare has had

   S. HIH 910-3 510/4
2013 NC State 4-H Horse Bowl Contest
Round 9

**Bonus Question**

21. Q. What is the correct name for the following four vitamins… Vitamin B1, B2, B6 and B12?

A. Vitamin B1  Thiamin
   Vitamin B2  Riboflavin
   Vitamin B6  Pyridoxine
   Vitamin B12  Cobalamin

S. Griffiths pp. 126-127 740/4

**Resume Open Questions**

22. Q. What does the slang term dog soldier describe?

A. A stallion that has been cast out from a wild herd

S. DET p. 83 910/3

23. Q. Clipping along the belly, under the neck and above the thigh is known as what type of body clip?

A. Trace clip

S. DET p. 950/3 950/3

24. Q. You do the math… Water hemlock ingestions results in sudden death in horses. Death results after ingestion of as little as 0.1 ounce for each 100 pounds of body weight. A horse that weighs 1000 pounds would be fatally poisoned after consuming how many ounces of water hemlock?

A. Poisoned after ingesting only 1 ounce

S. Lewis p. 343 770/3
25. Q. Identify which two grasses are the most palatable.
   
   A. Kentucky bluegrass and timothy
   
   S. Lewis p. 109 780/3

Toss Up – Bonus Attached

26. Q. Identify two types of colic in regards to the position of the small intestine.

   A. Displacement, Telescoping (intussusception) or twisting (volvulus)

   S. HIH 435a-1 830/4

Bonus Question

27. Q. Identify four physiological and/or anatomical factors that would indicate a horse’s racing performance or athletic ability.

   A. Conformation
      Oxygen intake ability (respiratory capacity)
      Gait
      Heart size and heart rate capacity (cardiac capacity)
      Proportion/type of muscle fibers

   S. Lewis pp. 220-222 400/4

Resume Open Questions

28. Q. What part of a decker saddle is described as a heavy canvas or poly cover with a wooden bar at the bottom?

   A. Half Breed

   S. YLM BEG 118-1L 1000/3
2013 NC State 4-H Horse Bowl Contest
Round 9

29. Q. What substance is produced in the body in response to an allergen?
   A. Histamine
   S. DET p. 12 400/4

30. Q. How would a base-wide, toe-out conformation affect the break over and landing of the foot?
   A. Would break over and land on the inside toe
   S. Evans p. 748 900/3

31. Q. What function do the superior labial levator muscles provide?
   A. Raise the upper lip
   S. Kainer plate 43 410/4

Last Question of the Round

32. Q. In regards to the racing industry, what does the expression “buy a lot” describe?
   A. Falling off the horse
   S. DET p. 43 1040/3
2013 NC State 4-H Horse Bowl Contest
Extra One-on-One Questions

100

1. Q. in the zoological classification of the horse, what phylum includes the horse?
   
   A. Chordata

   S. Griffiths p. 15 100/3

2. Q. Equus disappeared from North America during what time period?
   
   A. Pleistocene epoch

   S. Evans p. 4 100/3

200

3. Q. (Two Part) The foundation sire for the Morgan breed was Figure. Figure was known by what other name and how did he get that name?

   A. Justin Morgan – The custom at that time was to give the horse the same name as his owner

   S. Evans p. 36 200/3

4. Q. What breed was formerly known as the “Karster” horse?

   A. Lipizzan (Lipizzaner)

   S. HIH 159B-2 200/4
5. Q. What is the base color of a red silver horse?
   A. Bay
   S. HIH 1040-2 300/3

6. Q. What marking is known by the slang term “handprint”?
   A. Blood mark
   S. Griffiths p. 39 310/4

400

7. Q. What is the anatomical term for the coffin joint?
   A. Distal interphalangeal joint
   S. Evans p. 689 410/4

8. Q. Which hormone is needed for “milk let down” and parturition?
   A. Oxytocin
   S. Evans p. 127 490/3
9. Q. What type of inheritance affects males and females equally and results in an observed phenotype **only** when there are **two** copies of the **recessive** allele necessary for the trait?

   A. Autosomal recessive

   S. HIH 1060-2  

10. Q. Light areas of color over the eyes, on the muzzle, flanks and inside the legs are seen with influence of what color gene?

    A. Pangaré gene

    S. Evans p. 481

600

11. Q. What term describes too much angle in the pastern joint?

    A. Coon footed

    S. DET p. 68

12. Q. What slang term refers to legs in which the tendons lack definition and do not stand out clearly?

    A. Gummy legged

    S. DET p. 126
13. Q. During rapid growth, foals need more of which **two** amino acids?
   A. Lysine and threonine
   S. HIH 765-1 700/4

14. Q. Decreased immune function is associated with what vitamin deficiency?
   A. Vitamin E
   S. HIH 730-3 740/3

15. Q. Describe the typical stance of a horse with tetanus.
   A. “Saw horse” stance
   S. Griffiths p. 172 820/3

16. Q. What is the scientific name for the horn fly?
   A. Haematobia irritans
   S. HIH 415-2 835/4

17. Q. Which type of hammer is used for making and shaping shoes?
   A. Rounding hammer
   S. Evans p. 728 900/3
18. Q. What characteristic makes a horse described as a “sunfisher” a desirable mount in bronc-riding events at a rodeo?

A. It is a bucking horse that twists its body in the air

S. DET p. 259 910/4

1000

19. Q. When neck reining and completing a turn to the left, the rein on which side of the neck would be the opposition rein?

A. Rein on the right side of the neck

S. DET p. 196 1000/3

20. Q. Identify two of the classical “airs above the ground” when all four feet are off the ground.

A. Ballatade, capriole and croupade

S. DET p. 22, 48, 73 1090/4
1. Q. What are the two general types of chronic exertional rhabdomyolysis?

   A. Recurrent exertional rhabdomyolysis (RER)
      Polysaccharide storage myopathy (PSSM)

   S. HIH 795-4  700/4

2. Q. Which two hormones are produced by the adrenal glands?

   A. Epinephrine (adrenaline) and corticoids (also accept glucocorticoids, mineralcorticoids, norepinephrine, corticosterone, hydrocorticosterone, aldosterone, androgens)

   S. Evans p. 127  490/4

3. Q. The two semilunar valves are located between what specific structures?

   A. Right ventricle and pulmonary artery
      Left ventricle and aorta

   S. Evans p. 112  440/4

4. Q. Which two external parasites are intermediate hosts for habronemiasis?

   A. House fly and stable fly

   S. Lewis p. 167  835/3
1. Q. Identify four different variations of the rings on snaffle bits.

A. D-ring
   Half cheek
   Full cheek

   Egg butt
   Loose ring (O-ring)

S. HIH 1100-8 1000/3

2. Q. Other than infection, identify four problems that would result in a FPT or “failure of passive transfer” foal.

A. Mare that grazed endophyte-infested fescue
   Maiden mare (are sometimes agalactic)
   Low immunoglobulin G in colostrum
   Mare that is leaking milk longer than 24 hours before foaling
   Mare that rejects the foal
   Weak foal that is unable to stand
   Foal that lacks suckling reflex

S. HIH 950-2 500/4

3. Q. Identify three genetic disorders that primarily affect draft breeds.

A. Junctional Epidermolysis Bullosa (JEB)
   Aniridia
   Epitheliogenesis imperfecta
   Rhabdomyolysis (Monday morning disease, Azoturia)

S. Griffiths p. 100; HIH 1095-2; Evans p. 514 550/4

4. Q. What are the two predominant sire lines for Standarbred pacers and the two predominant sire line for Standarbred trotters?

A. Pacers – The Direct and The Abbe lines
   Trotters – The Axworthy and Peter the Great lines

S. Evans p. 29 200/4
1. Q. For what **maximum** period of time after parturition would the foal be able to absorb the immunoglobulins in colostrum?
   
   A. up to 12-36 hours after birth (accept anything within this range)
   
   S. HIH 950-3; Evans p. 197 500/3

2. Q. What breed is often confused with the Appaloosa because most are spotted?
   
   A. Rangerbred Horse
   
   S. Evans p. 58 200/3

3. Q. In the hind legs, what is the anatomical term for the short pastern bones?
   
   A. Middle phalanx or Second phalanx
   
   S. Kainer plate 12 410/3

4. Q. What term describes plant toxins that cross the placental barrier during pregnancy and cause defects in the foal?
   
   A. Teratogenic
   
   S. Lewis p. 332 770/3

5. Q. What is the contributing factor to the condition known as anaphylaxis?
   
   A. Severe allergy
   
   S. DET p. 10 800/3
2013 NC State 4-H Horse Bowl Contest
Tie Breaker 2

1. Q. What term describes the breakdown of feed into its smaller components?

   A. Digestion

   S. Griffiths p. 107 700/3

2. Q. In general, what is the expected effect of an antipyretic medication?

   A. Fever reduction (also accept increases heat loss; reduces heat production)

   S. DET p. 13 805/3

3. Q. What is the toxin in white snakeroot?

   A. Tremetol

   S. Lewis p. 320 770/4

4. Q. What type of activity would you use an Association saddle for?

   A. Rodeo events

   S. DET p. 17 1000/4

5. Q. A horse that stands camped under in the hind legs usually has what other conformation defect when viewed from the side?

   A. Sickle hock

   S. Lewis p. 384 600/3