

2007 Eastern National 4-H Horse Bowl Round One

One-On-One

1. C1 Q. What is an acquired physical defect that does not interfere with the horse's usefulness, but it may diminish its value?
- A. A blemish
- S. Evans 157, Lewis 382 620/1
2. C2 Q. Insulin controls glucose levels in the horse's body. Where is it produced?
- A. Pancreas
- S. Evans 127 490/2
3. C3 Q. What organ is responsible for the production of estrogen and progesterone?
- A. The ovaries
- S. HIH 910-4 510/1
4. C4 Q. What is the common term for a horse whose toes point inward towards each other?
- A. Pigeon-toed
Toed-in
- S. DET 212 600/1

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. The 1st phalanx is just below what long bone?
A. Cannon Bone (Metacarpal III)
S. Kainer plate 6 400/3
6. C2 Q. How old is a horse where all of the permanent incisors are in wear and the horse has what is termed a full mouth?
A. 5 to 6 years old (accept anything in that range)
S. YLM 205-2, DET 115 430/3
7. C3 Q. All of the horse's physiological senses are important in training. What is considered to be the most important of these senses for responding to cues in training?
A. Touch
S. HIH 1220 910/3
8. C4 Q. Horses have good hearing. What do they do with their ears to help localize the source of the sounds they detect?
A. Horses will turn their ears toward the direction of the sound
S. Evans 121 420/2

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. The blood leaving the right ventricle of the heart by the pulmonary arteries flows into what organ?
- A. Lungs
- S. Kainer plate 57 440/2
10. C2 Q. Name a two-beat diagonal gait.
- A. Trot
Rein-back
(Pace is incorrect – is not a diagonal gait)
- S. Evans 173 640/1
11. C3 Q. At what age of the horse do the permanent 1st or central incisors erupt?
- A. 2 ½ years
- S. HIH 240-1, Kainer plate 49 430/2
12. C4 Q. What part of the bridle keeps the crown piece from sliding down the horse's neck?
- A. Brow band
- S. HIH 1100-6 1000/3

End One-On-One

**2007 Eastern National 4-H Horse Bowl
Round One**

Begin Open Questions

13. Q. What breed is being described? The head is short and broad with large eyes and short, foxy ears. The muscling is short, compact and powerful, which gives it the ability to gain speed quickly. The disposition is calm.

A. Quarter horse

S. HIH 153-1 200/2

14. Q. In horseshoeing, what is the name that describes the most commonly used manufactured or preformed shoes?

A. Keg Shoes

S. DET 160 900/2

Toss Up – Bonus Attached

15. Q. The gaskin is located between which two joints of the horse's rear leg?

A. Stifle and hock (tarsus) – do not accept knee for stifle

S. HIH 220-3 400/2

Bonus Question

16. Q. Terms for gaits are sometimes synonymous. Give the other name for each of the following gaits: jog, canter, stepping pace and single foot.

A. Jog - trot
Canter - lope
Stepping pace - slow gait
Single foot - rack

S. Evans 172, 178 , Lewis 390 640/2

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. What is the foundation of any horse ration?
A. Good quality forage
S. HIH 750-1 700/1
18. Q. An adult male horse with no wolf teeth would have how many total teeth?
A. 40 teeth (also accept 38 – sometimes only one set of canines present - Lewis 177)
S. Kainer plate 48, HIH 240-3 430/1
19. Q. Gooseneck type trailer hitches and bumper-pull trailer hitches should be attached to what part of your vehicle?
A. Frame of your truck or tow vehicle
S. YLM 301-1L 960/2

Toss Up – Bonus Attached

20. Q. What are the three basic parts of a bridle?
A. Headstall, bit, and reins
S. HIH 1100-6 1000/2

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. In packing a Decker saddle, what is the name of the piece of canvas used to throw over the load as a protective cover?
- A. Manta
- S. HIH 1125-3 1020/3

Toss Up – Bonus Attached

26. Q. The horse's small colon lies in between and adjacent to what two parts of the digestive system?
- A. The large colon (transverse colon) and the rectum (Do not accept ascending colon)
(DET 249 is anatomically wrong – the small colon does not lie next to the cecum)
- S. Kainer plate 52, HIH 710-2 430/2

Bonus Question

27. Q. Identify the country of origin for the following breeds – Bashkir Curly, Haflinger, Hanoverian and the Exmoor?
- A. Bashkir curly – Russia (do not accept U.S. – see DET 8 ref)
Haflinger - Austria
Hanoverian – Germany
Exmoor – England
- S. HIH 169-1, Evans 43, 74, DET 8, 25 200/3

Resume Open Questions

28. Q. What is the common negative behavioral consequence for failing to provide your horse with adequate roughage?
- A. Your horse will develop vices such as chewing wood and eating bedding.
- S. HIH 710-5 700/2

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. What is the term used for the condition where the sensitive and insensitive laminae separates at the white line at the toe?
- A. Seedy toe
- S. Lewis 402 815/3
30. Q. The bones that make up the spinal column are classified as what type of bone?
- A. Irregular bones
- S. Evans 90 410/1
31. Q. What is the name for the structure in the abdomen that is multi-layered, hollow and “y” in shape, and suspended by the broad ligaments?
- A. Uterus
- S. YLM I226-1L, HIH 910-3 510/2

Last Question of the Round

32. Q. In horse racing, what is the term for finishing second in a race?
- A. Place
- S. DET 213 1040/2

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. What is the term for a horse that is lying down close to a wall or fence in such a way that its legs are trapped and it is unable to get up without assistance?
- A. Cast (casted)
- S. DET 51 920/3
6. C2 Q. What is the common term used to describe the physis?
- A. Growth plate
- S. Kainer plate 13 410/3
7. C3 Q. In regards to barn management, what is the key to successful control of flies and other external parasites of the horse?
- A. Good sanitation (also accept good management and control of manure.
- S. HIH 415-3 865/3
8. C4 Q. What is defined as the distance between successive imprints of the same foot?
- A. Stride (also accept stride length)
- S. Lewis 405, Evans 169 640/1

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. Most foals are born during what part of the day?
A. During the night.
S. YLM 112-2L 530/1
10. C2 Q. What is the term used to describe the reproductive habits of a mare when she undergoes multiple estrous cycles only during a specific portion of the year?
A. Seasonally polyestrous (need to provide both words)
S. HIH 910-5, Lewis 235 510/2
11. C3 Q. What term is used to describe a dark chocolate shade of the color chestnut?
A. Black or liver chestnut
S. Evans 80 300/2
12. C4 Q. Which gait is faster, the trot or the pace?
A. Pace
S. Evans 175 640/2

End One-On-One

2007 Eastern National 4-H Horse Bowl Round One

Begin Open Questions

13. Q. Name this unsoundness. This condition involves the cartilage structures of the horse. It may cause lameness initially, but once fully calcified the horse generally becomes serviceably sound. The condition may cause contracted heels in a younger horse. The lateral cartilages are calcified usually resulting from injuries.
- A. Sidebone
- S. HIH 230-4, Evans 160 620/3
14. Q. What is the proper term for the behavior category that involves the giving of care and attention between the mare and the foal?
- A. Epimeletic (not et-epimeletic-signally for care or attention)
- S. Evans 675 910/3

Toss Up – Bonus Attached

15. Q. What are the names of the first and second cervical vertebrae of the horse?
- A. 1st cervical vertebra – Atlas
2nd cervical vertebra – Axis
(Do not accept the Yes and No bones – describes the joint, not the bones)
- S. DET 17, 19 410/2

Bonus Question

16. Q. When you are cleaning and picking out your horse's hoof, name four things that you would inspect the foot for.
- A. Abnormal Growth Loose Shoes (if shod)
Bruises Loose/Missing Nails
Diseases (thrush/white line) Puncture Wounds
Uneven Wear Lodged debris (dirt, rocks)
General condition of hoof wall (cracks, splits, dry)
- S. Evans 70 900/3

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. Name the pony described by the following characteristics – mottled skin around muzzle, eyes and genitals area; white sclera encircling the eyes; striped hooves and one of seven approved coat patterns.
- A. Pony of the Americas – POA
- S. YLM 110-3L 200/3
18. Q. What is a double-rigged saddle?
- A. Saddle with 2 cinches
- S. DET 84 1000/2
19. Q. Other than their predominant chestnut color, what other cosmetic feature differentiates the Suffolk from the other two British draft breeds of horse?
- A. The Suffolk has no feathers on its legs
- S. Evans 73 200/2

Toss Up – Bonus Attached

20. Q. The cervix is a highly distensible muscle that serves as a barrier between what two structures in the mare's reproductive tract?
- A. The vagina and the uterus (uterine body)
- S. HIH 910-1, YLM 326-1L 510/2

2007 Eastern National 4-H Horse Bowl Round One

Bonus Question

21. Q. Name the 6 joints of the forelimb from proximal to distal.
- A. Shoulder, elbow, knee (carpus), fetlock (ankle), pastern and coffin
- S. Evans 91, Kainer plate 110, 11, 12 410/1

Resume Open Questions

22. Q. What is a combination horse?
- A. A horse that can be ridden or driven in harness
- S. DET 62 1050/2
23. Q. A young horse 8 months of age would have 24 deciduous teeth. What type of teeth does the young horse not have, that it will develop later as permanent teeth?
- A. Molars (also accept canines)
- S. HIH 240-2 430/2
24. Q. Which mineral aids in muscular activity, blood clotting, enzyme activation, and bone formation?
- A. Calcium
- S. DET 45, Lewis 20 750/2

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. Calks and studs are devices added to horseshoes for what purpose?
- A. Increase traction
- S. YLM 231-2 900/2

Toss Up – Bonus Attached

26. Two part Q. What color is the result of a double dilution of bay and what two colors are the results of a single dilution?
- A. Single dilution Dun and Buckskin, double dilution perlino
- S. Evans 81 300/2

Bonus Question

27. Q. Horses that are kept in stalls for any length of time depend on a good floor in the stall for comfort and safety. What are four factors you would look for in choosing a flooring material for your horse?
- A. Durable Non-Slip Absorbent
Easy to Clean Resistant to pawing Expense
Amount of bedding required Availability
(do not accept factors for bedding – question is about flooring)
- S. YLM 107-2L 920/3

Resume Open Questions

28. Q. What are the first parts of the foal to appear in a normal presentation during parturition?
- A. Front feet or hoof of the forelimb
- S. Kainer plate 73, HIH 940-4 510/2

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. You do not have a crossbuck or Decker saddle available, but want to do packing. What other commonly available saddle could you use with some modifications?
- A. Stock saddle (do not accept McClellan saddle – it is not commonly available)
- S. YLM 118-1L 1020/3
30. Q. When fluorescein dye is applied to the surface of the eye it will indicate any damaged areas to what structure of the eye?
- A. Cornea
- S. DET 110 820/3
31. Q. What is the correct term for eliminating pain from an injured part of the body by cutting a nerve?
- A. Nerving or neurectomy
- S. DET 190 420/2

Last Question of the Round

32. Q. A heart bar shoe would be used temporarily to treat a hoof problem where you want to transfer the weight from the hoof wall to what structure of the hoof?
- A. Frog
- S. HIH 515-4 900/2

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. What nutrients are primarily stored in the horse's body as glycogen?
- A. Carbohydrates (also accept sugar or glucose)
- S. DET 122, Lewis 391 730/3
6. C2 Q. What is the most significant factor in storing hay that will affect the quality of your hay?
- A. Moisture
- S. HIH 710-5 700/2
7. C3 Q. What would the offspring of a mule and a hinny be called?
- A. A miracle – both are sterile.
- S. Evans 76 200/2
8. C4 Q. The appearance of man in North America during the Paleolithic era coincided with the disappearance of the horse from the continent. What early use of the horse by man could have contributed to this?
- A. Use of the horse as food
- S. Evans 5 100/2

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. What is the stimulus for the horse's winter coat to start to grow?
A. Decrease in daylight hours (NOT decreased temperature)
S. YLM 304-2L 460/2
10. C2 Q. To be classified a blaze, the white must cover the full width of which bones?
A. Nasal bones
S. Evans 82 310/3
11. C3 Q. What type of medication is used to counteract a poison?
A. Antidote
S. DET 12 800/2
12. C4 Q. When comparing the crossbuck and Decker saddles, which is better suited to a sling load that is mantied (mant-teed)?
A. Decker
S. YLM 118-1L 1020/3

End One-On-One

**2007 Eastern National 4-H Horse Bowl
Round One**

Begin Open Questions

13. Q. Where in the horse's digestive tract are soluble carbohydrates digested to simple sugars and absorbed for use as energy?
- A. Small intestine
- S. HIH 710-1 430/2
14. Q. In draft horses, terrets are rings on the harness. What passes through these rings?
- A. The reins or lines
- S. DET 265 1050/3

Toss Up – Bonus Attached

15. Two part Q Steamed bone meal is considered an excellent natural supplement for what two minerals?
- A. Calcium and phosphorus
- S. YLM 302-4L 750/2

Bonus Question

16. Q. What four bones form the stifle joint?
- A. The femur, patella, tibia, and fibula
- S. Evans 91, Kainer plate 6 410/2

**2007 Eastern National 4-H Horse Bowl
Round One**

Resume Open Questions

17. Q. Thoroughpin is a soft, fluid-filled enlargement of the outside of the joint that can be pushed freely from the outside to the inside surface of the joint by palpation. What joint is it found in?
- A. The hock (tarsus)
- S. Evans 165, Lewis 406 620/3
18. Q. How high above the normal resting position of your horse's head is the recommended minimum height that your trailer should measure?
- A. 10 inches (accept any answer in range 10 – 12 inches)
- S. YLM 301-2L 960/3
19. Q. Name one of the two areas in the world where the early domestication of the horse was believed to have occurred between 4500 and 2500 B.C.
- A. China or Mesopotamia (also accept Asia)
- S. Evans 6 100/3

Toss Up – Bonus Attached

20. Q. Administering drugs to a horse to improve or hinder his performance in a race or competition is known as doping. Name 2 body fluids that may be tested to detect doping.
- A. Urine, saliva, blood
- S. DET 84, 227 800/3

**2007 Eastern National 4-H Horse Bowl
Round One**

Bonus Question

21. Q. Foal pneumonia is the major cause of mortality in foals. Name four (4) factors that predispose foals to pneumonia.
- A. Dust
Fluctuations in temperature
Extremes of temperature humidity
Parasites
Stress
Failure of passive transfer of immunity/no colostrum
Secondary to other infection ex. Influenza
Hereditary diseases ex. Combined immunodeficiency
Failure to vaccinate the mare
- Poor sanitation
Overcrowding
Poor ventilation
Poor nutrition
Prematurity
- S. HIH 950-8, Lewis 259 530/4

Resume Open Questions

22. Q. A properly fitted stirrup iron should allow how much space on each side of the widest part of the rider's foot?
- A. ¼ inch on each side
- S. HIH 1100-3 1000/3
23. Q. The first purebred Arabian breeding program in the United States is linked to what United States president who was given two Arab stallions by the Sultan of Turkey?
- A. President Ulysses S. Grant
- S. HIH 150-1 200/3
24. Q. Which gait is known as the “nearly ideal form of locomotion”, “mother of all gaits, or as “foundation gait”?
- A. The walk
- S. DET 113, Evans 172 640/2

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. Frequent urination and eversion of the vulva or winking will occur during what phase of the mare's reproductive cycle?
- A. Estrus or heat cycle
- S. HIH 910-1, Lewis 235 510/2

Toss Up – Bonus Attached

26. Two part Q In general terms what is injured in the shoulder to create the muscle atrophy seen in sweeney? What type of horse is this normally found in?
- A. A nerve (more specifically the suprascapular nerve)
Draft breed or horse used in harness
- S. Kainer plate 22, DET 260 810/4

Bonus Question

27. Q. In order to register your horse or identify it on a Coggins Test you must provide a description of your horse that will distinguish it from other horses. Other than color and markings, what are four other visual means of horse identification?
- A. Muscular dimples/defects Scars Cowlicks (hair whorls)
Lip tattoos Brands Chestnut patterns
Blemishes Sex Height
- S. Evans 80 960/3

Resume Open Questions

28. Q. What is the common term for the fluid that is produced by the lacrimal glands, collects in the medial canthus, and flows down the nasolacrimal duct?
- A. Tears
- S. Kainer plate 45, Evans 125 420/3

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. What mineral is synergistic with vitamin E and important in conjunction with vitamin E in protecting body tissues from oxidation induced damage?
- A. Selenium
- S. Evans 234, Lewis 28 750/2
30. Q. In rodeo, what is the name for the amount of prize money paid to the winners of each go-round of a competition?
- A. Day money (also accept round money)
- S. DET 78 1060/3
31. Q. In reference to horse racing, if your horse does not finish in the money what term is used to describe its finish in the race?
- A. Also-ran
- S. DET 7 1040/3

Last Question of the Round

32. Q. What disease is being described? This disease is a rhabdovirus that infects the nervous system of the horse. It can be transmitted to any mammal. There is no treatment and it is fatal if the horse has not been previously vaccinated.
- A. Rabies
- S. Lewis 174, DET 227 820/2

2007 Eastern National 4-H Horse Bowl Round One

One-On-One

1. C1 Q. Which muscle in the horse separates the abdominal and thoracic cavities?
- A. Diaphragm
- S. DET 80 410/3
2. C2 Q. What is the term for the genetic characteristics that are transmitted to offspring from parents and other ancestors?
- A. Heredity or genotype
- S. DET 139, 119 550/2
3. C3 Q. What vitamin deficiency will result in horses with poor, weak hoof walls?
- A. Vitamin A
- S. YLM 206-1L 740/3
4. C4 Q. Specifically, where are distal spots located?
- A. The coronet or coronet band
- S. Evans 83 310/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. What highly fatal disease is of concern anytime your horse experiences a wound, particularly a puncture wound?
- A. Tetanus
- S. Lewis 163 800/2
6. C2 Q. Why are roping reins one continuous strap?
- A. To prevent losing or dropping the reins when working the horse
- S. HIH 1100-8 1000/3
7. C3 Q. Where is the thickest part and the point of greatest wear of the hoof?
- A. The toe of the hoof
- S. YLM 106-1L 480/2
8. C4 Q. Which of the following common cereal grains fed to horses is the highest in crude fiber – barley, corn, oats or wheat?
- A. Oats
- S. Lewis 71 700/2

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. Nails which are driven to attach the horseshoe should exit the hoof how far above the shoe?
- A. $\frac{3}{4}$ to 1 inch (20 to 25 mm)
- S. HIH 535-5 900/3
10. C2 Q. What survival advantage does the horse have because of its monocular vision?
- A. Monocular vision allows a horse to detect predators from either side without turning its head. This is particularly important while grazing.
- S. HIH 1220-1, YLM 111-1L 420/3
11. C3 Q. When looking at the horse from the rear, how would you describe a horse whose hocks are too close together?
- A. Cow hocked
- S. DET 71, Evans 154 600/3
12. C4 Q. What is the term for a non-infectious inflammation of the sensitive laminae of one or more hooves?
- A. Laminitis
- S. Evans 166, DET 163 810/3

End One-On-One

2007 Eastern National 4-H Horse Bowl Round One

Begin Open Questions

13. Q. What vitamin deficiency can result in abnormal hoof growth and development, and can be eliminated by feeding green roughage.
- A. Vitamin A
- S. HIH 505-2 480/3
14. Q. Name the breed from the following description. This breed is distinguished by its balanced agility, temperament and good character. It has a rectangular compact body and powerful crested neck. The eyes are large and wide set. Grey is the dominant color. It has been associated with the Spanish Riding School in Vienna.
- A. Lipizzan (Lipizzaner)
- S. HIH 174-1 200/3

Toss Up – Bonus Attached

15. Q. Give two advantages of using high tensile vinyl fencing.
- A. Safe Strong/Durable Low maintenance
Longevity Cost effective
- S. HIH 350-5 920/3

Bonus Question

16. Q. You are running your hand down the lateral surface of the foreleg of your horse. Just below the knee you feel a swelling that is firm, but non-painful. What two bones are involved in this swelling, what is this condition called, and is it likely to cause a serious lameness?
- A. Cannon bone (metacarpal 3) and splint bone (metacarpal 4)
Splints
No
- S. Evans 159 620/3

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. What grain is being described? This grain is high in protein and energy. Because of its small kernel it must be processed before feeding. Never allow this grain to be more than fifty percent of the grain mix due to the possibility of forming a gluten ball in the stomach.
- A. Wheat.
- S. YLM 302-2L 700/3
18. Q. What is the name of the vaccine used in horses for prolonged protection against tetanus?
- A. Tetanus toxoid (not tetanus antitoxin – this is temporary protection only)
- S. DET 266 805/3
19. Q. When horses are handicapped in racing, what is done to try to equalize the performance of the horses in that race?
- A. Weight is added – more to the better horses
- S. DET 129 1040/3

Toss Up – Bonus Attached

20. Q. What two ways can the term “broom tail” be used to describe a horse?
- A. A heavy, coarse, full tail.
An ill-kept horse of uncertain breed and inferior quality
A Western range horse
- S. Evans 83, DET 41 300/5

**2007 Eastern National 4-H Horse Bowl
Round One**

Bonus Question

21. Q. Bandages are one of the common forms of treating an open wound in a horse. What are four reasons for using a bandage?
- | | | |
|----|------------------------------|------------------------------|
| A. | Immobilizes the wound | Promotes healing |
| | Keeps wound clean | Absorbs any drainage |
| | Protects from infection | Keeps medication on/in wound |
| | Protects from further trauma | Reduce swelling |
| | Controls hemorrhage | |
- S. YLM 109-2L 800/3

Resume Open Questions

22. Q. Ideally, in a balanced horse what should be the relationship between the height of the horse at the withers and the length of the body from the point of the shoulder to the point of the hip?
- A. They should be the same
- S. Evans 133 600/4
23. Q. A normal healthy mature horse without foot problems has its feet trimmed every six to eight weeks. How often should a foal's feet be trimmed?
- A. Once a month (also accept 30 days or 4 weeks)
- S. HIH 535-1, 525-3, Evans 720 900/3
24. Q. What is the term used to describe the nitrogen-containing organic compounds that are the building blocks of proteins?
- A. Amino Acids
- S. Lewis 380, DET 10 760/2

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. What disease is being described? There is no effective treatment or vaccination for this disease, but a horse may survive the acute phase of the disease and remain a carrier for the remainder of its life. The virus attacks cells in the horse's body including the red blood cells and causes anemia and jaundice. All horses should be periodically tested for this disease using the Coggins Test.
- A. Equine Infectious Anemia (EIA)
- S. HIH 630-1, 2 840/3

Toss Up – Bonus Attached

26. Q. In reference to actions of the horse, what are two ways the term bolting can be used?
- A. Gulping food rapidly without chewing
Charging or running off, or an unexpected move or jump
- S. Lewis 382, DET 34 930/3

Bonus Question

27. Q. Where are each of the three serous membranes called the pleura, peritoneum, and pericardium found in the horse?
- A. Thoracic cavity – pleura (covers the outer surface of the lungs)
Abdominal cavity – peritoneum (surrounding the internal organs)
Surrounding the heart – pericardium
- S. Kainer plate 56 400/4

Resume Open Questions

28. Q. What bit is being described? This bit is made out of a material that is non-allergenic. It is a mouthpiece that is very gentle to use and is a soft, apple-flavored rubber.
- A. Happy mouth
- S. HIH 1100-10 1000/3

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. In bench knee, the cannon bone is set too far to the outside of the knee joint. What defect is this most likely to cause?
- A. Splints
- S. YLM 229-1L 620/3
30. Q. What structure do the three membranes – allantois, amnion, and chorion – form?
- A. The fetal placenta
- S. Evans 340 510/2
31. Q. What is the common name for the medication magnesium sulfate that is used to treat hoof abscesses or as a laxative?
- A. Epsom salts
- S. DET 98 800/3

Last Question of the Round

32. Q. When riding dressage, what is a two-track exercise in which the horse moves forward and sideways at the same time?
- A. Half pass (do not accept leg yielding or shoulder in – they are part of the half pass, but do not adequately answer the question)
- S. DET 128 1010/3

2007 Eastern National 4-H Horse Bowl Round One

One-On-One

1. C1 Q. What is the name of the pigment that is responsible for the color of the skin, hair, and eyes?
- A. Melanin (not melatonin)
- S. DET 178, Evans 129 300/3
2. C2 Q. Considering the digestive tract anatomy of the horse, why is it recommended to feed a horse two or three times a day instead of once a day?
- A. The horse has a relatively small stomach.
- S. Evans 202 700/3
3. C3 Q. The genotype of the horse is its genetic makeup. What would be the term used to describe its outward appearance and the physical traits that are visible?
- A. Phenotype
- S. DET 211 550/2
4. C4 Q. The forces exerted by muscles in the distal foreleg are transmitted by tendons. Generally muscles are not found below what joint of the foreleg.
- A. Carpus (knee)
- S. Kainer plate 19 410/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. The Jockey Club maintains the registry of Thoroughbreds for the United States, Canada and Puerto Rico. What is the proper name of the register?
- A. The American Stud Book
- S. HIH 157-1 200/3
6. C2 Q. Ehrlichia risticii (air-lick-e-ah ris-tee-chee) is the causative agent of what equine disease?
- A. Potomac Horse Fever
- S. HIH 650-1 800/3
7. C3 Q. Curb is an inflammation of the long plantar ligament of the hock. What conformational defect predisposes a horse to a curb?
- A. Sickie Hocks
- S. HIH 230-7, DET 74, Kainer plate 32 620/3
8. C4 Q. You have just finished installing a beautiful white painted board fence around your pastures but you have a problem. Your horses are fighting over the fence and leaning into it and over it. What can you do to keep the horses off the fence?
- A. Install electric wire on top board inside each side of the fence
- S. Evans 766, Lewis 184-5 920/3

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. What is the best way to carry a load on a crossbuck saddle?
A. In panniers
S. HIH 1125-1 1020/3
10. C2 Q. Saddle chafes and shoulder rubs from poorly fitted saddles or other tack will create what type of wound on your horse?
A. Abrasion
S. YLM 109-1L 860/2
11. C3 Q. The poison cantharidin (can-thar-i-din) is a highly irritating substance that produces inflammation and blistering within hours of contact. What common pest of alfalfa is this toxin found in?
A. Blister beetle
S. Lewis 365, DET 46 770/3
12. C4 Q. A weight evaluation of your horse can be made more valuable in assessing the overall health of your horse by using what technique to determine your horse's body fat level?
A. Body condition score
S. HIH 720-3 700/3

End One-On-One

**2007 Eastern National 4-H Horse Bowl
Round One**

Begin Open Questions

13. Q. The long pastern, cannon, and proximal sesamoid bones comprise what joint of the horse?
- A. The fetlock joint (ankle)
- S. Kainer plate 12, 14 410/2
14. Q. What bit is being described? This bit is sometimes called a cowboy snaffle. It is a curb bit with short, straight, swivel shanks and a broken mouthpiece.
- A. Tom Thumb bit
- S. DET 270 1000/4

Toss Up – Bonus Attached

15. Q. Name two by-products that can be added to a horse's ration as a source of additional fiber.
- A. Beet pulp, wheat bran, or brewer's dried grains
- S. HIH 760-8 700/3

Bonus Question

16. Q. Compare the normal heart rate and respiratory rate of the adult horse at rest to the one week old foal.
- A. Accept any answers in the following ranges
- Adult horse 35 – 60 beats/min Foal 70 to 100 beats/min
Adult horse 8-16 breaths/min Foal 20-40 breaths/min
- S. YLM 115-1L, HIH 950-3, Evans 108, 111 530/3

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. What sound does a horse make in response to anger?
- A. Squeal
- S. Lewis 153, DET 253 910/3
18. Q. What is the common name for the disease being described? It is caused by anaerobic bacteria, usually as a result of wet and unsanitary conditions. The area of the commissures or sulcus is black and has a pungent odor and the frog is being damaged.
- A. Thrush
- S. YLM 334-1L, DET 268 815/3
19. Q. If you are using a stock saddle for packing, what piece of equipment that goes around the base of the horse's tail and attaches to the saddle would you use to keep the pack load centered?
- A. Croupier (crupper)
- S. YLM 118-2L, DET74 1020/3

Toss Up – Bonus Attached

20. Q. Name two clear or translucent structures that light must pass through to reach the retina in the horse's eye.
- A. Cornea and lens
- S. DET 102, Evans 123 420/3

2007 Eastern National 4-H Horse Bowl Round One

Bonus Question

21. Q. From distal to proximal, name the seven joints of the caudal leg.
- A. Coffin, pastern, fetlock (ankle), hock, stifle (not knee), hip, and sacroiliac
- S. Evans 98 410/3

Resume Open Questions

22. Q. What is the most common use of a liverpool bit?
- A. Used for driving (reference specifies heavy harness or plow horses, but research finds it is used in all disciplines of driving)
- S. DET 170 1000/4
23. Q. What is the term for the pivot point of the back that is the area between the last rib and the croup?
- A. Coupling or loin
- S. HIH 220-6, DET216 600/2
24. Q. Sweating and lactation are two physiological functions that will increase the free choice consumption of water and what other mineral supplement?
- A. Salt (Sodium and chloride)
- S. Evans 236, Lewis 25-6 750/3

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. What is the proper name for the layer of the uterus that is responsible for the powerful contractions that expel the foal at birth?
- A. Myometrium
- S. HIH 910-3 510/4

Toss Up – Bonus Attached

26. Two part Q Name two diseases caused by the bacteria Clostridia.
- A. Tetanus
Botulism
Foal septicemia (umbilical cord infection)
Enterotoxaemia (overeating disease)
Gangrene (anaerobic muscle infection and septicemia)
- S. Lewis 168, 251 & 361, DET 118, Evans 305 800/3

Bonus Question

27. Q. Straw is popular bedding for horses. Give three advantages or situations where straw is preferred and three disadvantages of using straw as a bedding material.
- | | | | |
|----|---------------|--|--|
| A. | Advantages | Foaling stalls
Comfortable for horse | Very absorbent
Relatively dust free |
| | Disadvantages | Horses eat straw
Highly combustible
Lg. Volume of debris | High labor in cleaning
Lg. Amount of storage
Difficult to dispose of |
- S. HIH 330-1 920/4

Resume Open Questions

28. Q. You reach into your tool box looking for your hoof nippers and grab what looks like nippers, but they have knobs on the ends of the handles. What tool do you have in hand?
- A. Pull-offs (pinchers, shoe pullers)
- S. HIH 530-1 900/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. What is the name of the process of heating a food material, usually a liquid, to a specific temperature for a specific length of time for the purpose of destroying bacteria?
- A. Pasteurization
- S. DET 205 700/3
6. C2 Q. What is a characteristic of wire mesh, high tensile wire, and electric fences that can result in injury to the horses confined by this type of fencing?
- A. These types of fencing are difficult for the horses to see.
- S. HIH 350-4 920/3
7. C3 Q. Why do you measure a horse's height at the withers?
- A. It is the tallest, reasonably immobile, and most constant part of the horse's topline.
- S. Evans 151 400/3
8. C4 Q. What common term would be used to describe a situation where the superficial flexor tendon is swollen due to tendonitis?
- A. Bowed tendon
- S. Kainer plate 19, DET 36 620/3

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. What perennial weed has five bright yellow petals and five green sepals and may cause diarrhea and colic if ingested by the horse?
- A. Buttercups
- S. Lewis 306 770/3
10. C2 Q. When driving a horse and turning right, which rein is the bearing rein?
- A. Bearing rein is the left rein (rein opposite the direction of the desired movement)
- S. DET 25 1050/3
11. C3 Q. If a horse suddenly starts rubbing its tail or rump, it is commonly thought to be caused by pinworms. However, there are other parasites that can cause this. Name one other parasite that would cause this behavior in the horse?
- A. Lice, mange mites, biting midges
- S. Evans 640, Lewis 158 865/4
12. C4 Q. What is the part of the brain that controls basic body functions such as temperature, respiration, and heart rate?
- A. The brain stem (medulla oblongata)
- S. DET 37 420/3

End One-On-One

**2007 Eastern National 4-H Horse Bowl
Round One**

Begin Open Questions

13. Q. In horse racing, what is the term used for a jockey in training?
- A. Apprentice or bug boy
- S. DET 14, 42 1040/3
14. Q. What procedure is being described? Anesthetic injections are given to numb certain parts of the body. This is used to diagnose the location of lameness or to facilitate standing surgeries.
- A. Nerve block, block, or local anesthetic (do not accept nerving)
- S. DET 32, 189 820/3

Toss Up – Bonus Attached

15. Q. Both base wide and base narrow stances place weight unevenly on the hoof. Name two orthopedic conditions that tend to develop due to this uneven weight distribution.
- A. Ringbone and sidebone
- S. HIH 230-3 620/5

Bonus Question

16. Q. Name five ways you can evaluate the fitness and soundness of your horse for training prior to a work or exercise period.
- A. Heart rate Temperature (not typical, but would accept)
Respiratory rate
CRT (Capillary refill time – crude measurement of blood pressure)
Visual observation of the horse at a walk or trot
Soreness or sensitivity of the back or loin noted while grooming
Soreness or lameness on flexion testing
Soreness or lameness on warm-up ride
- S. HIH 851-3 800/3

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. In what joint would you find a fibrocartilage structure called a meniscus that is located between the articulating surfaces of that joint?
- A. Stifle or femorotibial joint
- S. Kainer 13 410/5
18. Q. Why is immature hay at the pre-bloom or boot stage more desirable as a feed for horses than mature hay?
- A. At this stage of growth the hay is most easily digested by the horse – the highest leaf to stem ratio and has the highest nutrient value
- S. YLM 337-2L, Lewis 68 700/3
19. Q. What bit is being described? This bit looks like a snaffle bit, but it has slots at the top of the rings for the headstall to be attached and hooks for curb chain attachment.
- A. Kimberwicke
- S. HIH 1100-10, DET 161 1000/3

Toss Up – Bonus Attached

20. Q. Name two organs where you might find *Parascaris equorum* as adults or larvae.
- A. Small Intestine, lungs, liver
- S. Lewis 157 835/3

2007 Eastern National 4-H Horse Bowl Round One

Bonus Question

21. Q. Name the parts of the horse's foregut in correct order starting from the mouth and including the three parts of the small intestine.
- A. Mouth (not necessary to name)
Esophagus
Stomach
Duodenum
Jejunum
Ileum
- S. HIH 710-2, DET 249 430/3

Resume Open Questions

22. Q. What is the term when a horse intentionally canters on the opposite lead to the direction of travel?
- A. Countercanter (not wrong lead)
- S. DET 70 640/3
23. Q. What set of upper and lower teeth appear in the interdental space and are often absent or rudimentary in the mare?
- A. Canine teeth, tushes, or tusks
- S. Kainer plate 48, HIH 240-3, DET 46 430/2
24. Q. Which breed of draft horse has extensive white face and leg markings, long strides with extreme flexion of the knees and hocks, long silky hair on the lower legs and originated in Scotland?
- A. Clydesdale
- S. Evans 72, DET 59 200/3

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. In general, what is the main difference in the design of a cart and a carriage?
- A. Cart has two wheels and a carriage has four wheels
- S. DET 48, 49 1050/2

Toss Up – Bonus Attached

26. Q. What are two prerequisites necessary for the fly's life cycle to be successful?
- A. Breeding materials
Moisture
Warmth
- S. YLM 300-1L, HIH 415-3 865/3

Bonus Question

27. Q. Open front shelters or run-in sheds have become increasingly popular because of the many advantages they offer. Name five advantages.
- A. Inexpensive to build Inexpensive to maintain
Require less labor Good ventilation
Less fire hazard Less bedding/horse
Can be cleaned w/tractor Decreased behavior problems
More exercise Less space/horse compared to stalls
- S. Evans 772 920/3

Resume Open Questions

28. Q. Which bone of the horse am I describing? "The bone is very porous and blood vessels pass into and out of the pores. Lateral cartilages are attached to the wings of this bone."
- A. The third phalanx, also known as the distal phalanx, pedal, or coffin bone
- S. Evans 686, Kainer plate 12, DET 60 410/3

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. What is the common name for the “four-in-hand knot” that is tied the same as the knot in a man’s tie and is used to secure a saddle in place when a buckle is not used?
- A. Cinch knot
- S. DET 57 1000/3
30. Q. There are four different types of spavin involving the horse’s hock joint. Which spavin forms a soft distension of the joint due to synovial membrane inflammation?
- A. Bog spavin
- S. Lewis 404, Evans 165, DET 34 810/3
31. Q. When trailering your horse long distances, it is recommended you offer water to your horse every three to four hours. Since you cannot carry enough water for the entire trip, how can you deal with taste changes in water?
- A. Use additives to the water to mask the taste changes such as lemonade, sports drink powder, electrolyte solutions or soft drinks.
- S. YLM 301-2 960/4

Last Question of the Round

32. Q. Which chamber of the heart does blood returning from the body by the cranial and caudal vena cava enter first?
- A. Right atrium
- S. Kainer plate 57 440/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. In striding leg interference, a moving leg makes contact with another moving leg. What is this called when it occurs at a slow trot, disappears at a faster trot, and causes a characteristic clicking sound?

A. Forging

S. Evans 179 620/4

6. C2 Q. What is a common term for the vallate, foliate and fungiform papillae found on the tongue?

A. Taste buds

S. Kainer plate 50 430/3

7. C3 Q. When looking at infectious diseases in the horse, what is the term for the time period between the exposure to an infectious agent and the development of the first clinical signs?

A. Incubation or incubation period

S. Lewis 393, DET 151 800/3

8. C4 Q. The formula of heart girth squared times the body length divided by 330 will give you a good approximation of what for your horse?

A. Body weight

S. YLM 303-2L 700/3

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. What type of water testing would be done at an equine facility to determine potential fecal contamination of a water source?
- A. Fecal coliform counts
- S. HIH 360-1 920/4
10. C2 Q. Name one area on which a “leverage” bit places pressure that a “non-leveraged” bit does not.
- A. Poll or under the chin (curb groove)
- S. HIH 1100-8 1000/3
11. C3 Q. What is the term for the mucous membrane that lines the inside of the eyelid?
- A. Conjunctiva
- S. DET 67 420/3
12. C4 Q. A cool down period of activity is essential after vigorous exercise to allow your horse to eliminate any accumulated lactic acid. What will be the consequence for the next 24 to 48 hours if you do not do this?
- A. Sore muscles
- S. HIH 851-9, 895-1 810/4

End One-On-One

2007 Eastern National 4-H Horse Bowl Round One

Begin Open Questions

13. Q. What color pattern would your paint horse be classified given the following description? All four legs are white below the knees and hocks. Your horse has a star and stripe. The white body markings are regular, oval-shaped, distinct, and extend down the neck and chest. White crosses the back.
- A. Tobiano
- S. HIH 159-3, Evans 48 310/4
14. Q. Short, straight pasterns are associated with what other conformation problem?
- A. A straight shoulder (also accept upright)
- S. Evans 146 620/3

Toss Up – Bonus Attached

15. Two Part Question. Explain how the plant maturity of grass hay and legume hay are **visually** determined.
- A. The amount of seed heads of grasses and the amount of flowers present on legumes (note that color is not correct – color can be influenced by factors other than maturity)
- S. YLM 337-1L, Lewis 68, 69 700/3

Bonus Question

16. Q. A farrier generally uses two different types of hammers. What are their proper names and what are the differences in their use? Which one is heavier?
- A. Rounding or turning hammer – used for making and shaping shoes
Driving hammer – used for driving nails and forming and finishing the clinches. The claws of the driving hammer are used for wringing off the nails.
The rounding hammer weighs 2 to 2 ½ pounds and the driving hammer weighs less than one pound
- S. HIH 530-2, 530-4, Evans 728 900/3

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. Where is the occipital crest located on the horse?
- A. At the top of the head between the ears
- S. DET pg. 194 410/4
18. Q. Cribbing is one of the more common vices found in horses. If you detect this vice in your horse early, what is the best and most successful method of eliminating it?
- A. Cause alleviation – eliminate the motivation or common causes of frustration and boredom (do not accept cribbing straps – they are punishment or discipline methods that never eliminate the motivation)
- S. Lewis 375 910/4
19. Q. Using the proper name (genus and species), what parasite is being described. The life cycle takes six to seven months with the adult ending up in the large intestines. The larvae migrate to the anterior mesenteric artery and may cause problems within the digestive tract by forming clots. They are the most dangerous of the three large strongyles.
- A. Strongylus vulgaris
- S. HIH 430-2 835/3

Toss Up – Bonus Attached

20. Two part Q What is the name for the “bump” in the middle of a curb mouthpiece and what does it do?
- A. Port and it relieves pressure on the tongue, applies pressure to the roof of the mouth
- S. HIH 1100-10 1000/3

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. What term is used to describe the unsoundness that is rarely found in ponies and is less common in the light breeds than in the draft breeds? It is a calcification of the lateral cartilages of the coffin bone.
- A. Sidebone
- S. Evans 160, Lewis 403 620/4

Toss Up – Bonus Attached

26. Q. What two bones articulate with the distal sesamoid bone?
- A. Short pastern (middle phalanges, second phalanx)
Coffin bone (distal phalanges, third phalanx, pedal bone)
- S. Kainer Plate 12, Evans 98 410/3

Bonus Question

27. Q. What are the eight letters of the small (20m X 40m) dressage ring starting with the entry point and going clockwise?
- A. A-K-E-H-C-M-B-F
- S. DET 85 1010/4

Resume Open Questions

28. Q. What medication is being described? This medication may be used to treat severe asthma or anaphylactic reactions. It causes contraction of capillaries and arteries by “stimulating” the sympathetic nervous system. It causes an increase in the heart rate and blood pressure.
- A. Adrenalin (epinephrine)
- S. DET 4 800/4

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. What breed of horse that originated in the Ural Mountains of Russia, is especially well adapted to extremely cold weather, and noted for its long, curly coat of hair?
- A. American Bashkir Curly (accept Bashkir Curly)
- S. DET 8, Evans 57 200/3
30. Q. What is the primary function of the “short bones”?
- A. Absorb concussion
- S. Evans 90 410/3
31. Q. It is January and you are looking at a new boarding facility for your horse. It is clean, warm and comfortable in the barn. What might be the problem with this barn if you see condensation dripping from parts of the ceiling and there is a significant ammonia odor?
- A. Poor ventilation
- S. Lewis 183 920/3

Last Question of the Round

32. Q. What thin plate of cartilage sits in front of the larynx and prevents swallowed materials from going down the trachea?
- A. Epiglottis
- S. DET 97 450/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. You have a mare that weighed 1,000 lb prior to breeding. How much do you estimate her foal will weigh at birth?
- A. 90 to 100 lb (9 % to 10% of the mare's body weight)
- S. HIH 940-5 530/4
6. C2 Q. In dressage, what type of walk is being described? The head and neck nod up and down twice during each stride. The gait is ground-covering and the head and neck extended. The rear feet overreach the prints of the front feet.
- A. Extended walk
- S. Evans 172 640/4
7. C3 Q. What is the term for a specialized type of horseshoe pad that can be removed to treat or apply medication to the hoof and then reattached?
- A. Hospital pad
- S. HIH 515-5 900/4
8. C4 Q. What is the proper name for the eye formed on the end of the lariat through which the rope is passed to form a loop?
- A. Honda
- S. DET 141 1060/4

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. In the horse's muscles, the anaerobic break down of glucose creating the waste product lactic acid during hard exercise is performed in the absence of adequate levels of what specific element?
- A. Oxygen
- S. HIH 850-1 410/3
10. C2 Q. Open front shelters or run-in sheds have become increasingly popular because of the many advantages they offer. However, there are several disadvantages. Name one.
- A. Unable to monitor diet
Unable to control exercise
Safety issues/increased risk of injury to horses
- S. Evans 772 920/3
11. C3 Q. Which breed of horse originated in the United States as a high-stepping show ring horse and is a cross of the Arabian and Saddlebred breeds?
- A. National Show Horse
- S. DET 188 200/3
12. C4 Q. What is the name of a common skin condition of the horse that can resemble an ulcerated wart and may be caused by a virus?
- A. Sarcoid
- S. DET 240 860/3

End One-On-One

2007 Eastern National 4-H Horse Bowl Round One

Begin Open Questions

13. Q. There are no specific treatments for some poisonings, but horses are usually given activated charcoal and a saline laxative by stomach tube. What is the reason for giving these medications?
- A. To prevent further absorption of the toxin in the gastrointestinal tract (the activated charcoal binds with the toxin and the saline laxative speeds passage of any toxins through the digestive tract).
- S. Lewis 339 830/4
14. Q. Ventilation of a stable area is important for many reasons. In the hot summer it can provide cooling for the horses. The temperature in a properly ventilated barn should be no more than how many degrees above the outside temperature?
- A. 5 degrees Fahrenheit
- S. YLM 107-2L 920/4

Toss Up – Bonus Attached

15. Q. What two organs deliver enzymes and products into the duodenum to assist in the digestive process?
- A. Pancreas and liver
- S. Kainer Plate 54 430/3

Bonus Question

16. Q. Name the breed that is identified with the following five names or identifications:
Peacock of the horse world
Prince of ponies
Breed of blacks and grays
Palouse horse
Aristocrat of the show ring
- A. American Saddlebred, Hackney Pony, Percheron, Appaloosa, and Hackney Horse (**horse not pony**)
- S. Evans 38, 61, 69, HIH 158-2, 170-1 200/4

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. 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 to provide a leveraged action.
- A. Pelham
- S. HIH 1100-10, DET 207 1000/3
18. Q. In the horse's renal system, what structure connects the kidney to the bladder?
- A. The ureter
- S. Kainer 68 470/3
19. Q. A buck-kneed horse is sprung forward or over at the knee. This is considered a less serious fault than what type of knee conformation where the horse is back at the knee?
- A. Calf-kneed
- S. Evans 147 620/3

Toss Up – Bonus Attached

20. Q. Name two types of teeth in the male horse that never occur as deciduous teeth and are only found as permanent teeth.
- A. Molars
Wolf teeth
Canine teeth
- S. HIH 240-1 430/3

**2007 Eastern National 4-H Horse Bowl
Round One**

Bonus Question

21. Q. Name two of the three striding leg interferences in which the toe of the foreleg hits the hind leg on the same side, and describe where on the rear leg the striking is occurring.
- A. Scalping – cornet
Speedycutting – pastern or fetlock
Shin hitting – cannon bone
Hock-hitting – hock
- S. Evans 179, 180 620/4

Resume Open Questions

22. Q. The molds *Penicillium*, *Aspergillus* and *Fusarium* are responsible for most mycotoxin production. They are found sporadically in harvested and unharvested feeds. What is the most significant environmental factor in determining if the molds will grow and produce mycotoxins?
- A. Moisture
- S. Lewis 347 770/4
23. Q. The frog is a wedge-shaped mass that occupies the area between what structures at the heel of the foot?
- A. The bars (also accept commissures, lateral sulci or collateral groove)
- S. Evans 695, DET 62, Kainer plate 24 480/3
24. Q. Muscles that work together to accomplish a movement are called synergists. What is the term for muscles that oppose each other and limit movement?
- A. Antagonists
- S. Evans 696 410/4

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. You are trying to decide between straw and wood shavings for bedding for your ten horse boarding facility. Straw is cheaper, but why might you still think it would be more economical to use shavings?
- A. Shavings are less labor intensive and may pay for their extra cost by savings in labor expense
- S. HIH 330-1 920/3

Toss Up – Bonus Attached

26. Two part Q. Name and give the function of the large muscle located on either side of the face, sitting beneath the ear, and covering the mandible.
- A. Masseter muscle; chewing – closes the jaws
- S. Kainer plate 16, DET 176 410/4

Bonus Question

27. Q. Name four nutrients that a good quality legume hay would be higher in than a good quality grass hay.
- A. Energy Calcium Vitamin B
Protein Vitamin A
(will accept Phosphorus – only marginally higher)
- S. YLM 202-1L, HIH 750-3 700/3

Resume Open Questions

28. Q. What structure in the brain controls the release of hormones by the pituitary gland?
- A. Hypothalamus
- S. Evans 126 490/3

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. During pregnancy what structure in the mare protects the fetus from contamination and infection by serving as an impermeable barrier between the vagina and the body of the uterus?
- A. The cervix
- S. Evans 321, HIH 910-3 510/3
30. Q. What is the name for the special, flowing movement in which the forelegs roll to the outside as the horse strides forward that is performed by the Peruvian Paso?
- A. Termino
- S. Evans 43 640/3
31. Q. What condition is being described? This condition usually occurs in the horse's front legs and is found between the knee and the fetlock. It is more common in young horses in rigorous training. It starts as a soreness but can persist and forms a swelling on the front of the cannon bone.
- A. Bucked shins
- S. Evans 159-160 810/3

Last Question of the Round

32. Q. What do the following terms describe – pelican, gourd, appleton, dinner plate, and dally?
- A. Types of horns on saddles
- S. DET 14, 77, 81, 123, 207 1000/4

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. In the horse's eye, focused light rays which form the image on the retina are transmitted to the brain by what nerve?
- A. Optic nerve
- S. DET 167, Kainer 78 420/3
6. C2 Q. The angle of the slope of the shoulder is essential to the overall balance of the horse. As the slope of the shoulder becomes straighter what effect does this have on the length of the back?
- A. The back gets longer – the top line becomes longer
- S. YLM A323-2L 600/4
7. C3 Q. When a pacer hits the sole or shoe of a front foot with the diagonal rear foot, this interference is called what?
- A. Cross-firing
- S. Evans 179, DET 73 620/3
8. C4 Q. What type of hernia only occurs in a male horse?
- A. Scrotal hernia (not inguinal hernia)
- S. Evans 168 880/3

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. As the owner of a horse boarding and training operation, what type of insurance do you need to carry to protect you from situations where you may be held responsible for bodily injury or property damage, particularly where negligence may be claimed?
- A. Liability Insurance
- S. HIH 1340-5 940/4
10. C2 Q. What is the proper term for the blood vessel rich, bone producing membrane that covers bone except at the articular surfaces?
- A. Periosteum
- S. Kainer plate 9, DET 209 410/3
11. C3 Q. What is the name of the glandular organ located near the stomach which serves as a reservoir for red blood cells and assists the body in combating infectious organisms?
- A. Spleen
- S. Lewis 404 440/4
12. C4 Q. What is the name of the area on the horse's jaw where the curb chain should rest?
- A. Curb groove
- S. DET 75 1000/4

End One-On-One

**2007 Eastern National 4-H Horse Bowl
Round One**

Begin Open Questions

13. Q. Rain rot is a common term used to describe a condition where moisture and dirt allow a commonly found bacteria to cause an infectious situation, causing the hair coat to separate from the skin at its roots and slough off in sections? This is often confused with rain scald which is caused by an infection with what organism?

A. Fungus

S. DET 228 860/5

14. Q. A clinch block can be used to turn the head of the nail to start the clinch. If your horse objects to this procedure, what other tool could be used to turn the clinch?

A. Clinchers or clinching tongs (gooseneck, alligator or saddle horse clinchers)

S. HIH 530-3, Evans 745 900/4

Toss Up – Bonus Attached

15. Q. The common factor between these two unsoundnesses is that the type of tissue at each location that becomes infected is a bursa. What are the two unsoundnesses?

A. Poll evil and fistulous withers

S. Kainer plate 20, Evans 168 640/4

Bonus Question

16. Q. Name five conformational defects whose common name refers to another species of animal.

A.	Parrot mouthed	Pigeon-toed	Hound-gutted
	Monkey mouthed	Cow-hocked	Rat-tailed
	Ewe-neck	Coon-footed	Walleyed
	Goose-rumped	Pig-eyed	Wasp-Waisted
	Roach-back	Herring-gutted	Cow-eyed
	Calf-kneed	Mule ears	

S. HIH 620/3

**2007 Eastern National 4-H Horse Bowl
Round One**

Resume Open Questions

17. Q. Name one of the two endocrine glands that are attached to the brain.
- A. Pituitary gland or pineal gland
- S. Kainer plate 77 420/3
18. Q. What does the term “blow a stirrup” refer to?
- A. To lose a stirrup iron
- S. DET 33 1000/4
19. Q. What is the proper name (genus) of the parasite causing this disease? Adult horses rarely have clinical problems from this parasite – it primarily affects nursing foals. The small thread like adult worms in the small intestine can cause diarrhea and unthriftiness.
- A. Strongyloides (Strongyloides westeri)
- S. Lewis 158 835/4

Toss Up – Bonus Attached

20. Two part Q. What term describes the 45-50 foot long rope that is used with a lash cinch to secure a pack load and what are three types of hitches with which it can be used to secure the load?
- A. Lash rope
Single diamond, double-diamond, half-diamond, triple diamond, squaw, or Arizona
- S. HIH 1125-1 1020/4

2007 Eastern National 4-H Horse Bowl Round One

Bonus Question

21. Q. Cob – C O B or – cobby C O B B Y are terms used in the horse industry. Give 3 examples of how you might use these terms.
- A. Cob-tailed – an English custom of docking the tail to a 6 inch length.
Cob-tail class – one of two classes Hackney ponies are divided into for show.
Cob as a type rather than breed description – short legged, max height 15.1 hands with the bone and substance of a heavyweight hunter.
Cobby – as a description of a close coupled and stoutly built horse.
Cob - form of feed – “corn cob”.
Welsh Cob – a division of Welsh pony and horse based on type.
- S. Evans 63-64, DET 60, HIH 184-1 200/4

Resume Open Questions

22. Q. What hormone does the maturing follicle on the ovary release to stimulate the sexual behavior of the mares during heat?
- A. Estrogens
- S. HIH 910-6, YLM 326-3 510/3
23. Q. Which martingale combines the action of both the snaffle rein and draw reins?
- A. German martingale
- S. DET 120 1000/4
24. Q. What serious unsoundness is described as an enlargement that appears on the inside and front of the hind leg where the hock tapers into the cannon bone?
- A. Bone Spavin or Jack Spavin
- S. DET 35, HIH 230-4 620/3

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. Identify one of the two different places in the horse's skeletal structure where you would find an interosseus ligament.
- A. Attachment of the radius to the ulna (present only in foals and is later ossified) or the cannon bones to the splint bones.
- S. Kainer plate 14, Evans 158-9, DET 154 410/4

Toss Up – Bonus Attached

26. Two part Q. What is the proper term for the fluid that suspends the red blood cells in whole blood and what term is used for the fluid that remains once the red blood cells have clotted?
- A. Plasma – fluid in whole blood
Serum – in clotted blood
- S. Lewis 401, 403 440/4

Bonus Question

27. Q. Identify the bone or joint where the following blemishes or unsoundness would occur – sidebone, osselets and high and low ringbone.
- A. Sidebone – calcification of the lateral cartilages of the coffin bone
Osselets is a thickening of the joint capsule and/or adjacent bone at the front of the fetlock.
Low ringbone – bony growth of the second phalanx (short pastern) just above the coronary band – at the coffin joint
High ringbone – bony growth of the first phalanx (long pastern) just above the pastern joint – at the pastern joint
- S. Evans 160-1, Lewis 401, HIH 455-6 620/4

Resume Open Questions

28. Q. In what part of the vascular system does the majority of exchange of substances into and out of blood occur?
- A. Capillaries
- S. HIH 830-1 440/3

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. In the eastern U. S. rotational grazing can double the amount of forage you can generate from the same size pasture. Each area should be grazed for 10 to 14 days and then allowed to rest for how long?
- A. One month (accept four weeks or 30 days, also accept until grass grows to at least 3 inches)
- S. Lewis 105-6 970/5
30. Q. Your horse has been kicked by another horse and has a contusion. The trauma is sufficient to break blood vessels resulting in an abnormal pocketing and collection of blood in body tissues. What is this formation called?
- A. Hematoma (do not accept bruise – term synonymous with contusion and does not describe the situation in the question)
- S. HIH 440-5, Lewis 392 840/3
31. Q. To what structure does the 12th cranial nerve – the hypoglossal nerve – provide motor control?
- A. The tongue
- S. Kainer plate 78 420/4

Last Question of the Round

32. Q. What is the last event to occur in the last stage of labor in the mare?
- A. Expulsion of the placenta or afterbirth
- S. Kainer plate 73, Lewis 246 510/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. If a pair of alleles is identical what is that individual considered to be with respect to those genes?
- A. Homozygous
- S. YLM 335-1, HIH 1020-2 550/4
6. C2 Q. What is a horse doing when it is engaging in coprophagia?
- A. Eating feces
- S. Lewis 375, DET 68 930/3
7. C3 Q. What term is used to indicate that a horse may have a structural problem or deviation which has only a limited effect on the horse's ability to perform?
- A. Serviceably sound
- S. HIH 230-1 600/4
8. C4 Q. Give one other term that can be used to describe the condition of Exercise Induced Pulmonary Hemorrhage (EIPH) which is the presence of blood in the respiratory tract of the horse.
- A. Bleeders (do not accept epistaxis – is a term for nose bleed)
- S. YLM 325-2, HIH 810-2 850/4

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. Why is it important that you know where the transverse facial artery and facial artery run on your horses head?
- A. These are two important sites for taking your horses pulse
- S. Kainer plate 62 440/3
10. C2 Q. This is the largest and most common group of toxins affecting horses, occurring in both harvested and unharvested feeds.
- A. Mycotoxins
- S. Lewis 346 770/4
11. C3 Q. The term diaphysis refers to what part of a long bone?
- A. The shaft of the bone
- S. Kainer plate 9, DET 80 410/4
12. C4 Q. In response to GnRH release from the hypothalamus what structure releases FSH and LH?
- A. Pituitary gland
- S. HIH 910-6 510/3

End One-On-One

**2007 Eastern National 4-H Horse Bowl
Round One**

Begin Open Questions

13. Q. What breed of horse is known for its distinctive gait, in which the horse performs a brisk walk with the front legs and trots with the back legs and originated in the Ozark Mountains of Missouri and Arkansas?
- A. Missouri Foxtrotter (also accept Fox Trotting Horse – Evans)
- S. DET 181, Evans 41-42 200/4
14. Q. What is the horse racing term for a type of wagering where the person placing the bet must pick the win and place finishers in a race in exact order?
- A. Exacta
- S. DET 100 1040/4

Toss Up – Bonus Attached

15. Q. What two sets of bones serve as pulleys to change the direction of the deep digital flexor tendon?
- A. Proximal sesamoids and distal sesamoid (Navicular bone or shuttlebone)
- S. Kainer plate 12, DET 188 410/4

Bonus Question

16. Q. There are three types of *Gastrophilus* – horse bot flies. Give either their common names or scientific names and identify one area on the horse where they deposit their eggs.
- A. *G. intestinalis* – Common horse bot fly – forelegs, chests, neck, stomach, hind legs & flanks
G. nasalis – Throat bot fly – under horse’s jaws and throat
G. hemorrhoidalis – Nose bot fly – upper & lower lips
- S. YLM 300-3L 835/4

**2007 Eastern National 4-H Horse Bowl
Round One**

Resume Open Questions

17. Q. If a horse is afraid of something and is unable to run away from the source of fear, it is left with a choice of fighting or submission. What can you do to encourage submission to things that may happen repetitively such as the use of a twitch?
- A. Make the event end with a pleasurable, positive, or non-fearful experience
- S. Lewis 376 930/5
18. Q. The two color genes – lethal white and dominant lethal roan – cause early embryonic death in fetuses when found in what pairing of alleles?
- A. Homozygous
- S. Evans 511-3 550/4
19. Q. What is the name of the iron-containing protein found in erythrocytes that binds to oxygen?
- A. Hemoglobin
- S. HIH 830-1 440/3

Toss Up – Bonus Attached

20. Two Part Q. The “Plantation Gait” was a smooth ground covering gait that made the Tennessee Walking Horse popular in the south. What is the proper name for the gait and how many beats is it?
- A. The running walk
4 beats
- S. Evans 178 640/3

2007 Eastern National 4-H Horse Bowl Round One

25. Q. What event triggers the end of the estrus or heat cycle usually within 24 hours?
- A. Ovulation
- S. Lewis 235, Evans 323, HIH 930-1 510/3

Toss Up – Bonus Attached

26. Q. Two part question. Hay baled at a moisture level of 17-20% is ideal. Give one reason why moisture content above and one reason why moisture content below this amount would potentially reduce the quality of baled hay.
- A. Below this level the hay is dry and will lose leaves during baling and storage – this decreases nutritional value and palatability. Above this moisture level the potential for mold production increases (also increased heat is produced which decreases protein levels)
- S. YLM 337-2L, Lewis 69 700/4

Bonus Question

27. Q. Name three ways the term “points” can be used in relation to horses and the horse industry?
- A. Sharp edges on the cheek teeth
Coloring of the mane, tail and legs
Values for winning or placing at approved shows
On an English saddle the part of the pommel arch that extends below the stirrup bar
On a western saddle the lower part of the tapadera
Team in the back of the leaders in an eight horse hitch
Type of race – point-to-point
“Pointing” – perceptible extension of the stride with little flexion
Standing position when one of the front legs is extended ahead of the other (sore foot is put in front to take the weight off of it)
- S. DET 215, Kainer plate 48, HIH 1100/2 1070/4

Resume Open Questions

28. Q. What conformation defect is predisposed to a carpal chip, especially in young racehorses?
- A. Calf knees
- S. Kainer plate 11 620/4

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. What specific type of insurance would you need to purchase in order to insure your horse against death from sickness, injuries, disease or old age?
- A. Full mortality or all risks mortality insurance (do not accept only mortality insurance – does not cover the specified items. Specified insurance would also not be correct as it covers only one specific event)
- S. HIH 1340-1 940/5
30. Q. How does the spleen help the race horse increase its level of arterial oxygen and maintain levels of physical exertion?
- A. The spleen contracts releasing additional red blood cells to carry oxygen
- S. HIH 830-2, Evans 114 440/4
31. Q. Your horse is experiencing recurrent mild colic. Your veterinarian is auscultating the right side of your horse's abdomen for borborygmus. What specific part of the digestive tract is he listening to?
- A. Cecum
- S. HIH 710-2, DET 35 430/5

Last Question of the Round

32. Q. What is the purpose of a half breed on a Decker saddle?
- A. Provides extra padding, holds the pack away from the horse's side
- S. HIH 1125-1 1020/3

**2007 Eastern National 4-H Horse Bowl
Round One**

5. C1 Q. What is the term for the cloth that is draped across the lap of passengers to keep them warm and dry when riding in a carriage?
- A. Apron or rug
- S. DET 14, 237 1050/4
6. C2 Q. What organ, that produces lymphocytes and is located in the cranial mediastinum of the thorax is at its largest in the foal at six to eight weeks and decreases in size with age, becoming difficult to find in older horses?
- A. Thymus
- S. Kainer plate 63 440/5
7. C3 Q. Botulism is a relatively uncommon, but very acute and highly fatal feed related toxicity in horses, particularly foals. What is the term used to describe a foal with this problem?
- A. Shaker foal
- S. Lewis 347 770/4
8. C4 Q. What function does the sinoatrial node in the wall of the right atrium perform that is essential to the heart?
- A. It is the pacemaker for the heart
- S. Kainer plate 58 440/5

**2007 Eastern National 4-H Horse Bowl
Round One**

9. C1 Q. Which breed of horse originated in Mexico as a result of crossing Andalusian stallions with Quarter Horse mares?
- A. Azteca (not Galiceno – pony)
- S. DET 19 200/5
10. C2 Q. What is the proper term for the layers of loose and dense fibrous connective tissue that are found superficially under the skin and deep covering the muscles?
- A. Fascia
- S. Kainer plate 15 410/4
11. C3 Q. What can be inserted into the horse through the ventral meatus?
- A. Nasogastric tube or endoscope
- S. Kainer plate 65 450/5
12. C4 Q. Even in winter, access to water is absolutely essential for horses. The horse will willingly consume adequate quantity of water in the winter if the water is kept above what minimum temperature?
- A. 45 degrees Fahrenheit (accept anything in range 40 to 50 degrees F or 7 to 9 degrees C)
- S. YLM 104-1L 920/4

End One-On-One

2007 Eastern National 4-H Horse Bowl Round One

Begin Open Questions

13. Q. The stay apparatus is a system of muscles, ligaments and tendons that's purpose is commonly thought to lock the legs to allow a horse to rest while standing. Name one of the two other functions this apparatus performs.
- A. Helps reduce concussion or prevent overextension
- S. DET 254, Evans 708, Kainer 21, 36 410/5
14. Q. Once the follicle has ruptured and released the ova the luteal phase begins. The corpus luteum begins to form and is responsible for the release of what hormone?
- A. Progesterone
- S. HIH 910-6. YLM 326-3L 510/3

Toss Up – Bonus Attached

15. Q. Toss Up Question - What two features made the Percheron a popular draft breed?
- A. The lack of feathers on their legs and their speed at the walk
- S. Evans 69 200/5

Bonus Question

16. Q. Name four advantages of feeding oats to your horse.
- A. Difficult to over feed – less likely to cause founder
Most palatable of grains
Soft kernel means processing is not necessary
Stores better than other grains
Less likely to have molds/mycotoxins
Not considered a “hot” feed – horse is less likely to become too spirited
- S. Lewis 73 700/4

2007 Eastern National 4-H Horse Bowl Round One

Resume Open Questions

17. Q. Name one of the structures the hyoid bones support?
- A. The larynx, base of the tongue, guttural pouches, and pharynx
- S. Kainer plate 42, DET 146 410/4
18. Q. What hormone produced by the pituitary gland increases during the second stage of parturition and works to increase uterine contractions and encourage milk let-down?
- A. Oxytocin
- S. Evans 340, Lewis 398, DET 200 510/4
19. Q. Why is a five diamond V-mesh wire considered the safest wire fencing to be used for all horses?
- A. The close weave (small openings) keeps even foals from catching their foot in it.
- S. HIH 350-3 920/3

Toss Up – Bonus Attached

20. Two part Q. What does “TDS” stand for? What does TDS indicate about water quality?
- A. Total Dissolved Solids. High TDS indicate water that may be contaminated or unfit for consumption or have a high salinity.
- S. Lewis 7 700/5

**2007 Eastern National 4-H Horse Bowl
Round One**

Bonus Question

21. Q. When hitching horses one in front of the other, what are the correct terms for a two, three, and four horse hitch?
- A. Two-tandem
Three-random
Four-quadrem
- S. DET 225, 229, 263 1050/5

Resume Open Questions

22. Q. What is the name of coat markings or areas of the skin where there is no pigment?
- A. Flesh marks
- S. DET 110 310/4
23. Q. The Sertoli cells in the stallion's testes stimulate spermatogenesis in the stallion. What hormone from the pituitary gland controls the Sertoli cells?
- A. FSH (Follicle Stimulating Hormone)
- S. YLM 327-1 520/5
24. Q. A coon-footed horse has too much slope at what joint?
- A. Pastern
- S. YLM 323-2L 600/3

**2007 Eastern National 4-H Horse Bowl
Round One**

25. Q. Equine Herpes Virus causes the respiratory disease in horses. One strain of the virus, EHV-1 can also cause what other problem?
- A. Abortion in pregnant mares (also accept either birth of weak foals or a paralytic neurological disease)
- S. HIH 445-6 880/3

Toss Up – Bonus Attached

26. Q. The autonomic nervous system regulates many of the internal operations of the body and unconscious responses to external stimuli. What are the two divisions the autonomic nervous system is divided into?
- A. Sympathetic and parasympathetic
- S. DET 18, Kainer 80 420/5

Bonus Question

27. Q. Name four things whose length is determined by shoulder angle.
- A. Length of neck Length of Stride
Length of back Depth of hearth girth
(do not accept angle of pastern – is not a change in length)
- S. YLM 223-2L 620/4

Resume Open Questions

28. Q. Which part of the horse's brain controls the coordination of movement?
- A. Cerebellum
- S. DET 53 420/4

**2007 Eastern National 4-H Horse Bowl
Round One**

29. Q. What type of protective boots would reining or roping horses wear to protect the rear portion of the fetlocks from injury or abrasion during sliding stops?
- A. Skid boots
- S. DET 246 1000/4
30. Q. Why is the hoof wall harder at the toe than at the quarters?
- A. Because the toe is further from the coronary band and therefore more keratinized
- S. HIH 505-4 480/3
31. Q. The seminiferous tubule is the functional unit of what organ in the horse?
- A. Testicle
- S. HIH 357 520/3

Last Question of the Round

32. Q. In measuring respiratory capabilities of the horse, tidal volume and respiratory rate are used to determine what respiratory parameter?
- A. Minute volume (total amount of air inspired or expired per minute)
- S. HIH 810-1 450/3

**2007 Eastern National 4-H Horse Bowl
Round One**

1. Q. The costal cartilages of the first eight ribs articulate with what bony structure?

A. The sternum

S. Kainer plate 8 410/3

2. Q. Which type of harness racing is most frequently seen in the United States today?

A. Pacing

S. Evans 29 200/2

3. Q. What term would be used to describe a horse that is cantering on one lead in front and a different lead in the rear?

A. Disunited (also accept cross firing or cross canter)

S. DET 82 640/3

4. Q. What hormone released by the uterus if the mare is not pregnant is responsible for the regression of the corpus luteum and the return of the mare cycling?

A. Prostaglandin (prostaglandin F2 alpha, PGF2 alpha)

S. HIH 910-6. Kainer plate 71 510/4

5. Q. What is the name of the small ring snaffle used on a full, or Weymouth bridle?

A. Bradoon (Bridoon also accepted spelling)

S. HIH 1100-10, DET 39 1000/3