

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round One

**One on One Questions**

- 1) C1 **Q – What breed of horse, ranging in size from 13-15.2 hands, reflects its Spanish heritage through its proud head carriage, grace and elegance?**  
A – Paso Fino  
S - AYHCLM (110-2)
- 2) C2 **Q - What action causes the horse bot fly to hatch?**  
A – Horses licking themselves (friction and moisture)  
S - HIH (415-5)
- 3) C3 **Q – What are two (2) quick tests a horse owner can do to check for dehydration?**  
A - The skin pinch test, and check the gums for moist or tackiness  
S - EqSci (164)
- 4) C4 **Q - What part of the mare’s reproduction system is made up of the labia, clitoris and the vestibule?**  
A – Vulva  
S - AYHCLM (326-1)
- 5) C1 **Q - What is another name for fats?**  
A - Lipids  
S - EqSci (143)
- 6) C2 **Q - What is the single most important characteristic of equine selection?**  
A - Balance  
S - AYHCLM (223-2)
- 7) C3 **Q – Fill in the blank. Age determination is made by studying the twelve (12) front teeth called the \_\_\_\_\_.**  
A – Incisors  
S - HIH (240-1)
- 8) C4 **Q - Puberty in stallions generally occurs around what age?**  
A - 18 months of age (1 year and 1/2)  
S - Lewis2 (226)
- 9) C1 **Q - What disease is caused by a potent neurotoxin produced by the bacterium *Clostridium tetani*?**  
A - Tetanus or Lockjaw  
S - AYHCLM (114-1)
- 10) C2 **Q - What causes the sounds produced by the heart?**  
A – The rush of blood and the closing of the heart valves  
S - CAHA2 (58)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**

**Sr. Round One**

- 11) C3 **Q - What is another term for "equine distemper"?**  
A - Strangles  
S - Evans2 (96)
- 12) C4 **Q - When traveling long distances, how often should a horse be offered water, in hours?**  
A - Every 3-4 hours  
S - AYHCLM (304-2)

**Toss-Up Questions**

- 13) **Q - What does a strong digital pulse in a foot indicate?**  
A - There is an injury to the foot or leg/laminitis/bruise/abscess  
S - EqSci (161)
- 14) **Q - What is an "obligate parasite"?**  
A - A parasite that cannot survive away from the host animal  
S - AYHCLM (300-1)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - Name one (1) cause of founder?**  
A - Consuming excessive amounts of grain, consuming large amounts of cold water by the hot inactive horse, consumption of lush green forage  
S - Lewis2 (390)
- 16) **BONUS**  
**Q - The small intestine is composed of three (3) parts. Name them.**  
A - Duodenum, jejunum, ileum  
S - CAHA2 (51)
- 17) **Q - What color is a double dilution of bay?**  
A - Perlino  
S - Evans2 (496-497)
- 18) **Q - Fill in the blank. The undesirable gait deviation, caused by toe-ing out, is called \_\_\_\_\_.**  
A - Winging  
S - CAHA2 (plate 39)
- 19) **Q - Why is sand a poor bedding material?**  
A - It absorbs very little urine and horses can pick up or consume the sand and develop sand colic  
S - Evans2 (819)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round One**

- 20) **TOSS-UP WITH BONUS ATTACHED**  
**Q – What is the main function of a headstall?**  
A – To hold the bit evenly and comfortably in the horse's mouth  
S - HIH (1100-6)
- 21) **BONUS**  
**Q - Long eyelashes are an evolutionary characteristic of the Arabian which developed for what reason?**  
A - The Arabian originated in the desert, thus, long eyelashes were needed to help keep sand out of their eyes  
S - HIH (150-1)
- 22) **Q - The Connemara is famed for what ability?**  
A - Jumping  
S – Evans2 (65)
- 23) **Q – What part is on an English bridle that is not found on a western bridle?**  
A – The noseband or cavesson  
S - AYHCLM (1100-8)
- 24) **Q - What jargon term identifies a horse that seems to require less feed than other horses kept under similar conditions?**  
A – Easy keeper  
S - Lewis2 (195)
- 25) **Q – What is the first thing to consider when selecting a horse for purchase?**  
A – What will the horse be used for; purpose  
S – EqSci (153)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What is the minimum recommended size of a box stall?**  
A – 10x10 ft  
S - AYHCLM (320-3)
- 27) **BONUS**  
**Q - Name three (3) trace minerals essential in the horse's diet.**  
A – Selenium, iodine, copper, zinc, manganese, iron, or cobalt.  
S – Lewis2 (19)
- 28) **Q – What equine disease resembles asthma in humans?**  
A – Heaves  
S – EqSci (279)
- 29) **Q – What is the main difference between a burro and a donkey?**  
A – A burro is feral while a donkey is domesticated  
S – EVANS2 (76)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round One**

- 30) **Q - What is "sweet feed"?**  
A - Grain that contains molasses  
S - LEWIS2 (405)
- 31) **Q - Name the type of fencing material that is most dangerous to horses.**  
A - Barbed wire  
S - EVANS2 (761)
- 32) **Q - What are the "gonads"?**  
A - Organs that produce sex cells, such as ovaries or testes  
S - IDET (122)

**END OF ROUND ONE**

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Two**

**One on One Questions**

- 1) C1 **Q – Fill in the blank. By the first week of life, a foal will nurse as many as \_\_\_ times per hour?**  
A – 7 times  
S - AYHCLM (112-2)
- 2) C2 **Q - What is the recommended protein level for older horses?**  
A – 10%  
S - HIH (450-2)
- 3) C3 **Q – What part of the digestive system is known as the “fermentation vat”?**  
A – The cecum  
S - EqSci (112)
- 4) C4 **Q - Imagine your horse has been in an accident and is at risk of suffocating. What procedure can be used to form an artificial opening into the windpipe to give the horse oxygen?**  
A – Tracheotomy  
S - IDET (272)
- 5) C1 **Q - What is the epiglottis?**  
A - A cartilage trap that serves to prevent food from entering the larynx when swallowing occurs  
S - Evans2 (105)
- 6) C2 **Q - At what age is a horse particularly susceptible to ascarids?**  
A - Young horses under 1 year of age  
S - Lewis2 (156-57)
- 7) C3 **Q - A horse should be fed approximately how many pounds of total feed per day for every 100 pounds of weight?**  
A – 2 pounds  
S - EqSci (106)
- 8) C4 **Q - At what age, in months, should a vaccination program begin?**  
A – 3 months  
S - Evans2(564)
- 9) C1 **Q - Name three (3) of the six (6) body sites evaluated when determining body condition score.**  
A - Back, neck, withers, ribs at midbarrel, behind the shoulder at the forerib, tailhead  
S - AYHCLM (203-2)
- 10) C2 **Q - Name two (2) kinds of lice that infest horses. Of these two (2) kinds, which one causes the most damage?**  
A – The sucking lice and the biting lice. The sucking lice does the most damage.  
S - Evans 2 (642-643)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Two**

- 11) C3 **Q - What part of the horse's digestive system is equivalent to the human's "appendix"?**  
A - Cecum  
S - EqSci (112)
- 12) C4 **Q - What do you call a mare that has been bred the previous breeding season but failed to conceive or carry a foal full term?**  
A - Barren mare  
S - Lewis2 (382)

**Toss-Up Questions**

- 13) **Q - Name the three (3) types of muscle.**  
A - Smooth, cardiac and skeletal  
S - Evans2 (99)
- 14) **Q - There are seven (7) different types of western saddles. Name three (3) types.**  
A - Pleasure/trail, endurance, equitation, reining, gymkhana, roping, cutting, barrel racing  
S - AYHCLM (1100-4-5)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - Which of the following types of salt is recommended to be available for free-choice consumption: trace mineralized salt, iodized salt or plain salt?**  
A - Trace-mineralized salt  
S - Lewis2 (26)
- 16) **BONUS**  
**Q - Name the three (3) sources of dietary energy needed in a horse's ration.**  
A - 1) Carbohydrates 2) Proteins 3) Fats  
S - Lewis2 (5)
- 17) **Q - What dominant gene masks the effects of other color genes, but is lethal when homozygous?**  
A - The white gene  
S - Evans2 (484)
- 18) **Q - When looking at the horse's teeth, what first appears as a yellow mark in the front central enamel ring as the cups disappear and then later as a dark circle near the center of the tooth?**  
A - Dental star  
S - AYHCLM (240-3)
- 19) **Q - How long is a furlong, in miles?**  
A - .125 miles (1/8 of a mile)  
S - IDET (116)

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Two

- 20) **TOSS-UP WITH BONUS ATTACHED**  
**Q** – The modern horse is not native to the North American continent. The ancestors of the North American horse were originally brought to the continent by whom?  
A – The Spanish Conquistadors  
S – Evans2 (7)
- 21) **BONUS**  
**Q** - Name the four (4) electrolytes lost in sweat or urine during hot weather.  
A - Calcium, sodium, chloride, potassium  
S - AYHCLM (410-1)
- 22) **Q** – The procedure that examines an animal's body after death is called what?  
A - Necropsy  
S - IDET (189)
- 23) **Q** - Where does the pinworm deposit its eggs?  
A – Around the anus  
S - Lewis2 (158)
- 24) **Q** - What is another name for the shoulder blade?  
A – Scapula  
S - EVANS2 (97)
- 25) **Q** - Who is the first horse registered in the American Quarter Horse Association?  
A – Whimpy P-1  
S - IDET (292)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
**Q** – What term describes the molecules responsible for recognizing antigens from foreign molecules on cell surfaces?  
A - Antibodies  
S – EqSci (274)
- 27) **BONUS**  
**Q** - What four (4) purposes do saddle blankets serve?  
A – To protect the horse's back, absorb sweat and moisture, protect the saddle, and help the saddle fit better.  
S – HIH (1100-1)
- 28) **Q** – At what age is the Galvayne's groove half way down the incisor?  
A – 15 years  
S – EVANS2 (93)
- 29) **Q** – A good rule of thumb is to provide how many quality acres of pasture per horse?  
A – 1 acre  
S – EqSci (335)

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Two

- 30) **Q – What is instinctual behavior?**  
A – An unlearned form of behavior  
S – IDET (153)
- 31) **Q – Which of the following feedstuffs is low in calcium? Grass, grass hay, legume hay or grains?**  
A – Grains  
S – EqSci (132)
- 32) **Q – What type of reining is used when neck reining?**  
A – Indirect  
S – IDET (189)

**END OF ROUND TWO**



2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Three

**One on One Questions**

- 1) C1 **Q – What tool do you use to take a hay sample for nutrient analysis?**  
A – Hay probe  
S - Lewis2 (115)
- 2) C2 **Q - What is the common treatment for a horse suffering from heat cramps?**  
A – Cool down, rub down and give electrolytes  
S - HIH (410-1)
- 3) C3 **Q – What are the four (4) parts that compose the mare's uterus?**  
A - The body, cervix, and 2 horns  
S - CAHA2 (70)
- 4) C4 **Q - Which contains more joints: the front limb or hind?**  
A – The hind limb  
S - Evans2 (98)
- 5) C1 **Q - What type of bedding is preferred for foaling mares?**  
A - Straw  
S - Lewis2 (184)
- 6) C2 **Q - How many bones make up the horse's skull?**  
A – 34 bones  
S - CAHA2 (6)
- 7) C3 **Q - Threonine, methionine and histidine are all what?**  
A – Essential amino acids  
S - Evans2 (263)
- 8) C4 **Q - During foaling, what is the term for when the foal's rump or hind feet are presented first in the birth canal?**  
A - Breech birth  
S - IDET (38)
- 9) C1 **Q - What breed association accepts ponies taller than 14.2 hh in their association?**  
A - Welsh Pony Breed Association  
S - EqSci (28)
- 10) C2 **Q - During inclement weather, if horses huddle together, what type of behavior are they exhibiting?**  
A – Contactual  
S - EVANS 2 (673)
- 11) C3 **Q - Genes are made up of what complex molecules?**  
A – DNA  
S – EqSci (87)

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Three

- 12) C4 **Q - What is a tumor of the pigment-forming cells called?**  
A - Melanoma  
S - Evans2 (514)

**Toss-Up Questions**

- 13) **Q - What are the three (3) major types of hay?**  
A - Legumes, grasses and cereal grain hays  
S - Lewis2 (63)
- 14) **Q - Name three (3) materials that bit mouthpieces can be made of.**  
A - Stainless steel, solid nickel/never rust, aluminum, happy mouth, vulcanite, german silver, copper, rubber, or leather  
S - AYHCLM (1100-10)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What are the four (4) identifiable characteristics a horse must have to be a registered appaloosa?**  
A - Coat pattern, mottled skin, vertically striped hooves, white sclera around eye  
S - HIH (158-1)
- 16) **BONUS**  
**Q - The most important nutrient needed by the horse is water. The level of water intake differs among horses due to several key factors. What are three (3) of the four (4) factors that influence water needs in horses?**  
A - Temperature, activity, function, and food intake (along with food type)  
S - Evans2 (244/245)
- 17) **Q - What is the recommended covering for the floor of a horse trailer?**  
A - Rubber mats  
S - AYHCLM (1155-2)
- 18) **Q - For what purpose are most horses purchased?**  
A - The majority of horses are purchased for personal or family recreation  
S - HIH (110-1)
- 19) **Q - What is the period of reproductive dormancy called?**  
A - Anestrus  
S - AYHCLM (226-3)
- 20) **TOSS-UP WITH BONUS ATTACHED**  
**Q - How long does a mare produce colostrum?**  
A - A maximum of 48 hours  
S - Evans2 (427)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Three**

- 21) **BONUS**  
**Q - Name four (4) ways forage can be processed.**  
A – baled, dehydrated, pelleted, silage, cubed, haylage  
S - AYHCLM (302-1)
- 22) **Q - A horse has a hard time focusing clearly, but can see what readily?**  
A – Detect movement  
S - HIH (1220-1)
- 23) **Q - List the three (3) antigenically different strains of equine encephalomyelitis.**  
A – Eastern, Western and Venezuelan  
S - LEWIS2 (169)
- 24) **Q - Name an external parasite that causes considerable pain by piercing the horse's skin with their bayonet-like mouth parts.**  
A – Horse flies or deer flies  
S - AYHCLM (415-2)
- 25) **Q - A shoe boil is also known by what other name?**  
A – Capped elbow  
S - Lewis2 (382)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
**Q - Name two (2) kinds of bar shoes.**  
A – Egg bar and heart bar  
S - HIH (515-2)
- 27) **BONUS**  
**Q - Name three (3) problems that occur when a horse chews wood.**  
A – Excessive tooth wear, colic, mouth infections, possibly choke  
S – Evans2 (183)
- 28) **Q – A "hay belly" may be an indication of excess what in the horse's diet?**  
A – Fiber  
S – LEWIS2 (4)
- 29) **Q – When a horse backs, what gait is the horse accomplishing in reverse?**  
A – The trot  
S – EqSci (122)
- 30) **Q - How can you tell if a spot is a true white area on the horse?**  
A – White hairs must be present at birth, grow out of pink skin & not change with age  
S – EVANS2 (81)
- 31) **Q – What is the most valuable and vulnerable joint of the horse?**  
A – The hock  
S – EqSci (134)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Three**

- 32) **Q – Why are white hooves typically not favored?**  
A – They are thought to be softer and wear faster  
S – EqSci (164)

**END OF ROUND THREE**

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Four**

**One on One Questions**

- 1) C1 **Q – This poisoning, also referred as blind staggers, comes from ingesting what moldy feed?**  
A – Moldy corn  
S - Lewis2 (357)
- 2) C2 **Q - What is a poultice used for?**  
A – To increase blood supply to an area or to draw out infection  
S - HIH (440-6)
- 3) C3 **Q – Cryptorchidism is a condition in which there is a failure of one (1) or both testes to descend completely into the scrotum of the horse. Give the names for the two (2) types of cryptorchidism and state if the types are usually fertile or sterile.**  
A - Unilateral-Fertile, Bilateral-Sterile  
S - Evans2 (520)
- 4) C4 **Q - What is the term for the luteal phase of estrus?**  
A – diestrus  
S - CAHA2 (71)
- 5) C1 **Q - Why are fats and oils needed in the horse's diet?**  
A - For the absorption of the fat soluble vitamins A,D,E,K and as a source of the unsaturated fatty and linoleic acid.  
S - Lewis2 (18)
- 6) C2 **Q - What is another name for the digital cushion?**  
A - Plantar cushion  
S - Evans2 (696)
- 7) C3 **Q - Why is vitamin C not essential in the horse's diet?**  
A – It is synthesized in the horse's digestive tract  
S - IDET (284)
- 8) C4 **Q - What organ is being described? It is dark purple, with a soft consistency; glandular; oblong in shape; located near the stomach; serves as reservoir for red blood cells and assists the body in combating infectious organisms?**  
A - Spleen  
S - LEWIS2 (404)
- 9) C1 **Q - The mating of a chestnut with a cremello should produce offspring what color?**  
A - Palomino  
S - Evans2 (67)
- 10) C2 **Q – What vertebrae compose the lowest part of the spinal column which extends into the rump area?**  
A – Sacral vertebrae  
S - IDET (239)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Four**

- 11) C3 **Q - What is the master gland of the horse?**  
A – The pituitary gland  
S - EqSci (213)
- 12) C4 **Q - Where are the intercostal muscles located?**  
A - Between the ribs  
S - AYHCLM (895-1)

**Toss-Up Questions**

- 13) **Q - How many vertebrae are present in the normal horse?**  
A – 54  
S - CAHA2 (54)
- 14) **Q - Name the three (3) gaits of the Paso Fino.**  
A – Paso Fino (fine walk), Paso Corto (short walk), Paso Largo (long walk)  
S - EqSci (82)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - Name two (2) things that good quality legume hay is higher in than good quality grass hay.**  
A – Energy, protein, calcium, vitamin A, B vitamins  
S – AYHCLM (202-1)
- 16) **BONUS**  
**Q – Name the four (4) cavities of the horse's skull.**  
A - Orbital, cranial, nasal and bucal  
S - Evans2 (90)
- 17) **Q - What is a common water soluble vitamin supplement used to promote healthy hooves?**  
A - Biotin  
S - EqSci (128)
- 18) **Q – In what year did Secretariat win the Triple Crown?**  
A - 1973  
S - Evans2 (24)
- 19) **Q – One of the first requirements for registration in the United States Trotting Association is the ability to trot or pace a mile in what amount of time?**  
A – 2 minutes and 30 seconds  
S - HIH (160-1)
- 20) **TOSS-UP WITH BONUS ATTACHED**  
**Q – What two (2) options does an owner of a horse with a positive Coggins test have?**  
A – 1) Horse is freeze branded & kept in quarantine; 2) Horse is euthanized  
S - LEWIS2 (175)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Four**

- 21) **BONUS**  
**Q - Name the three (3) foundation sires of the thoroughbred.**  
A - Byerly Turk, Godolphian Arabian (or Barb), Darley Arabian  
S - Evans2 (21)
- 22) **Q - What two (2) types of vaccines are available to treat tetanus?**  
A - antitoxin and toxoid  
S - EqSci(172)
- 23) **Q - What are the two (2) most important considerations when selecting a horse trailer?**  
A - Comfort and safety  
S - HIH (1155-2)
- 24) **Q - The forearm of the horse is composed of what two (2) bones?**  
A - The radius and the ulna  
S - Evans2 (684)
- 25) **Q - Give the common name for the tarsal joint.**  
A - Hock  
S - LEWIS2 (393)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What an average reining score?**  
A - 70  
S - HIH (162-1)
- 27) **BONUS**  
**Q - The Jockey Club registers Thoroughbred horses foaled in what three (3) countries?**  
A - United States, Puerto Rico, and Canada  
S - HIH (157-1)
- 28) **Q - What term describes fermented forage plants?**  
A - Silage  
S - LEWIS2 (403)
- 29) **Q - What is the purpose of the meiotic cycle?**  
A - To produce gametes or sex cells  
S - EqSci (70)
- 30) **Q - What are signals called that travel from the afferent nerves, and instead of reaching the brain, go directly to the spinal cord and then back to the efferent nerves and the muscles?**  
A - Reflexes  
S - EqSci (114)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Four**

- 31) **Q – What is the minimum size requirement for a foaling stall, in feet?**  
A – 12 feet by 16 feet  
S – EVANS2 (780)
- 32) **Q – Why are the cecum and colon so large in the horse?**  
A – So that food moves slower to give bacteria time to break down cellulose  
S – EqSci (92)

**END OF ROUND FOUR**



2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Five

**One on One Questions**

- 1) C1 **Q – What is the depression on the bottom of the frog called?**  
A - Central sulcus or cleft  
S - Evans2 (695)
- 2) C2 **Q - What disease is an uncommon, rapidly fatal septicemic disease caused by *Bacillus anthracis* contracted through biting fleas or by ingestion?**  
A – Anthrax  
S - Lewis2 (175)
- 3) C3 **Q – What are the three (3) different types of negative reinforcement used to train horses?**  
A - Punishment, escape, and avoidance  
S - HIH (1240-3)
- 4) C4 **Q - Name the breed that is a solid, sturdy, docile horse that was originally developed for Army use. It hails from West Germany and is used for show jumping, dressage and combined training.**  
A – Trakehener  
S - IDET (273)
- 5) C1 **Q – In what country was polo developed?**  
A - Persia  
S - Evans2 (162)
- 6) C2 **Q - What measurement indicates the amount of nitrogen in a feedstuff?**  
A – Crude Protein  
S - Evans2 (212)
- 7) C3 **Q - What is the normal equine hearing range, in kilohertz?**  
A – 55 hertz to 33.5 kilohertz  
S - EqSci (64)
- 8) C4 **Q - What is the fluid that lubricates a joint?**  
A - Synovial fluid  
S - Evans2 (182)
- 9) C1 **Q – When talking about equine insurance, what does "ASD" stand for?**  
A - Accident, Sickness, Death  
S - HIH (1340-3)
- 10) C2 **Q - Name one (1) area where the horse was first domesticated 6,000 years ago.**  
A – Ukraine, Western Europe, or Central Asia  
S - EqSci (13)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Five**

- 11) C3 **Q – What is the lining of the uterus called?**  
A - Endometrium  
S - CAHA2 (70)
- 12) C4 **Q - The ovary is responsible for the production of what two (2) hormones?**  
A - Estrogen and Progesterone  
S - HIH (910-4)

**Toss-Up Questions**

- 13) **Q - An endurance horse can get thumps from a deficit of what two (2) minerals?**  
A – Calcium and Potassium  
S - Evans2 (273)
- 14) **Q - What is the most common cause of heaves, Chronic Obstructive Pulmonary Disease, asthma or broken wind in horses?**  
A – Hypersensitivity or allergy to fungal spores in hay or bedding  
S - Lewis2 (291)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What two (2) colors of horses are always heterozygous because the homozygote fetuses die early during fetal development and are almost never born?**  
A – White and roan  
S – AYHCLM (1040-3)
- 16) **BONUS**  
**Q – What are the six (6) organs in the respiratory system?**  
A - Nasal cavity, pharynx, larynx, trachea, bronchi and lungs  
S - Evans2 (192)
- 17) **Q - What disease is caused by excessive phosphorous and a low level of calcium?**  
A – Big head disease  
S - Evans2 (228)
- 18) **Q – To be considered a business rather than a hobby by the IRS, how many years must a horse business make a profit?**  
A – 2 out of every 7 years  
S - HIH (1360-2)
- 19) **Q – A poorly ventilated barn can result in a horse having what type of respiratory problem?**  
A – Pneumonia or breathing problems  
S - AYHCLM (320-7)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**

**Sr. Round Five**

- 20) **TOSS-UP WITH BONUS ATTACHED**  
**Q – In what type of horse is tying up most common?**  
A – Very fit horses that are on regular daily exercise but have missed a few days and stayed on full feed  
S - Evans2 (611)
- 21) **BONUS**  
**Q - As of 2007, there are five (5) known genetic mutations possible in horses. Name three (3) of the five (5).**  
A - HYPP (Hyperkalemic Periodic Paralysis) SCID (Severe Combined Immunodeficiency), OLWS (Overo Lethal White Syndrome), JEB (Junctional Epydermolysis Bulosa), GBED (Glycogen Branching Enzyme Deficiency)  
S - HIH (1095-1)
- 22) **Q - Name one (1) of the three (3) states with the highest equine population.**  
A – Texas, California or Florida  
S – EqSci (34)
- 23) **Q - The four (4) primary paths of water loss from the horse body are what?**  
A - Urine, feces, sweat and respiration  
S - Evans2 (244)
- 24) **Q - Name two (2) issues associated with using concrete as a stall floor.**  
A – More bedding is needed to soak up urine that does not drain, cold, slippery, increased leg problems  
S - HIH (320-3)
- 25) **Q – What are the soft swellings on the front or sides of the fetlock joint, caused by injury to the joint capsule of the fetlock, called?**  
A – Osselets  
S – EqSci (141)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What is an inflammation of the sesamoid called?**  
A – Navicular disease  
S - EVANS2 (98)
- 27) **BONUS**  
**Q - What are four (4) of the six (6) factors that can influence a deworming program?**  
A – Climate, humidity, rainfall, season, concentration of horses per land area, age of horses  
S – HIH (430-7)
- 28) **Q – What is it important conformationally for a horse to have a “clean” throatlatch?**  
A – Enhances the ease of breathing and allows for maximum flexion of the chin without binding the jaws on the neck  
S – EqSci (164)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**

**Sr. Round Five**

- 29) **Q**–The body of the horse is made up of many systems. Which system includes the brain, spinal cord and associated nerves and special sensors?  
A – The nervous system  
S – EVANS2 (89)
- 30) **Q** – Name two (2) cases in which horses would need additional nutrients combined with their usual diet.  
A – Growth, work, reproduction, or lactation  
S – EqSci (248)
- 31) **Q** – How much longer is the gestation period of the jennet compared to a mare, in days?  
A – App 30 days longer  
S – EVANS2 (76)
- 32) **Q** – A horse requires a minimum of how many gallons of water per 100 pounds of body weight per day?  
A – 1 gallon per 100 lbs  
S – EqSci (271)

**END OF ROUND FIVE**

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Six**

**One on One Questions**

- 1) C1 **Q – What is most of the hoof wall composed of?**  
A - Epithelia cells that have been keratinized  
S - Evans2 (692)
- 2) C2 **Q - How much weight does a Standardbred lose in a 1-mile race?**  
A – 12-33 pounds  
S - Lewis2 (200)
- 3) C3 **Q – What material is the second hardest substance in the world, next to diamonds, which are added to horseshoes to increase traction and durability?**  
A - Borium  
S - IDET (35)
- 4) C4 **Q - Name the genetic disease that traces back to the Quarter Horse stallion Poco Bueno.**  
A – HERDA (hereditary equine regional dermatosparaxis asthenia) or HC (Equine Hyperclastosis cutis)  
S - HIH (675-1)
- 5) C1 **Q - Vices are classified into three (3) categories; what are they?**  
A - Dangerous to man, dangerous to the horse, nuisance habits  
S - Evans2 (182)
- 6) C2 **Q - What are two (2) things that the vestibulocochlear nerve is responsible for?**  
A - Hearing and balance  
S - CAHA2 (78)
- 7) C3 **Q – Your mare is in a state of heavy milking and begins to convulse and goes into a coma. What condition if your mare likely experiencing and what caused it?**  
A – Eclampsia. Likely caused due to loss of calcium through milk  
S - IDET (88)
- 8) C4 **Q - What is “hyperlipemia”?**  
A - Unusually high levels of fat in the blood  
S - Evans2 (406)
- 9) C1 **Q - What muscle regulates the flow of stomach contents into the deodenum?**  
A - Pyloric Sphincter Muscle  
S - CAHA2 (51)
- 10) C2 **Q – Why would a mare’s physiological make-up make her less likely to retain bladder stones than stallions or geldings?**  
A – Mares have a much shorter and wider urethra that allows their excretion  
S - Lewis2 (296)

**2011 NC 4-H Horse Program**

**District Horse Bowl Questions**

**Sr. Round Six**

- 11) C3 **Q - What is the key source of hormones used in the world's leading estrogen replacement therapy used to treat osteoporosis and to relieve short-term symptoms of menopause?**  
A - Pregnant mare urine  
S - (HIH 175-1)
- 12) C4 **Q - What is a bog spavin?**  
A - The swelling of the tarsocrural joint capsule  
S - CAHA2 (plate 32)

**Toss-Up Questions**

- 13) **Q - How many different coat patterns are accepted by the Appaloosa breed?**  
A - Eight  
S - Evans2 (34)
- 14) **Q - In the 1980s, the Cream Draft Horse breed was placed on what list by the American Livestock Breeds Conservancy?**  
A - The endangered species list  
S - HIH (155 B-1)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What is the most severe bit used in western-style riding?**  
A - The spade bit  
S - AYHCLM (1100-10)
- 16) **BONUS**  
**Q - What is the largest salivary gland in the horse and where is it located?**  
A - Parotid; under the ear  
S - Evans2 (197)
- 17) **Q - What organic acid is produced by anaerobic muscle metabolism?**  
A - Lactic acid  
S - IDET (163)
- 18) **Q - Why is the mare's estrus cycle termed seasonally polyestrus?**  
A - Because she undergoes several estrous cycles only during a specific portion of the year  
S - HIH (910-5)
- 19) **Q - What are the two (2) types of handicaps used in horse racing?**  
A - Weight carried and length of an average horse  
S - Evans2 (571)

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Six

- 20) **TOSS-UP WITH BONUS ATTACHED**  
**Q – What part of the brain controls basic body functions such as respiration, temperature, and heart rate?**  
A – The brain stem  
S - IDET (37)
- 21) **BONUS**  
**Q - What are three (3) of the four (4) B complex vitamins that do not have numbers assigned to them?**  
A - Biotin, folic acid, niacin and pantothenic acid  
S - EqSci (128)
- 22) **Q - Name the three (3) different types of deworming programs.**  
A - Interval, Seasonal and Continual  
S - LEWIS2 (160)
- 23) **Q - The bark and leaves of a Choke Cherry tree contain what poison that causes difficulty breathing and can result in death?**  
A - Cyanide  
S - IDET (56)
- 24) **Q - Which nerve is responsible for the sense of smell?**  
A – Olfactory nerve  
S - EVANS2 (92)
- 25) **Q – One of the most popular equestrian events in the United States is the National Horse Show held each November. Where is this event held?**  
A – Madison Square Garden in New York City  
S – EqSci (15)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
**Q - What is nephritis?**  
A – Inflammation of the kidneys  
S - IDET (189)
- 27) **BONUS**  
**Q - 2 part Question: What hormone is secreted by the corpus luteum and how does this hormone level change if pregnancy occurs or doesn't occur, following ovulation?**  
A – Progesterone is secreted by the corpus luteum. If pregnancy occurs the corpus luteum grows and produces enough progesterone to maintain pregnancy. If pregnancy doesn't occur, the corpus luteum degenerates and progesterone decreases which allows another follicle to develop.  
S – LEWIS 2 (386)
- 28) **Q – A “knocked-down hip” is defined by a fracture of what bone?**  
A – Ilium  
S – EqSci (134)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Six**

- 29) Q – Out of twenty-two (22) starts, how many races did Man-O-War win?  
A - 21  
S – EVANS2 (22)
- 30) Q – In premature foals, which organ is particularly underdeveloped?  
A – Lungs  
S – EqSci (275)
- 31) Q – What does the term “acey-deucy” describe?  
A – When a jockey rides with one stirrup leather longer than the other  
S – IDET (2)
- 32) Q – Of all horse management practices, which is the most neglected?  
A – Foot care  
S – EqSci (344)

**END OF ROUND SIX**



2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Seven

**One on One Questions**

- 1) C1 **Q – A common complication in the healing of leg wounds is the formation of what?**  
A - Excessive Granulation  
S - AYHCLM (109-2)
- 2) C2 **Q - What is a “mecate” and how long is it?**  
A – A long combination lead rope and reins attached to the heel of a bosal: 21 feet  
S - IDET (178)
- 3) C3 **Q – Name two (2) types of horseshoe nails.**  
A - City shape, regular shape, frost head shape  
S - Evans2 (738)
- 4) C4 **Q - Agalactia is when the mare is unable to produce milk. Give a nutritional reason for why this condition may occur.**  
A – Grazing on fescue pasture during pregnancy  
S - IDET (4) EVANS2 (276) LEWIS2 (234)
- 5) C1 **Q - What gene restricts color distribution to the “points,” ie the mane, tail, lower legs and ear rims, by means of a pair of alleles?**  
A - Agouti Gene  
S - EqSci (95)
- 6) C2 **Q - A horse that has insufficient time to forage may chew wood as a filler and to alleviate boredom. What might be another reason for increased wood chewing and decreased forage intake?**  
A - Increased gut acid  
S - Lewis2 (197)
- 7) C3 **Q - What is the meconium?**  
A – A foal's first stool  
S - CAHA2 (52)
- 8) C4 **Q - A horse's body contains approximately how much blood?**  
A - 13.2 gallons or 50 liters  
S - HIH (830-1)
- 9) C1 **Q - Which famous American Saddlebred was the six-time winner of the \$10,000 five-gaited championship at the Kentucky State Fair?**  
A - Wing Commander  
S - Evans2 (39)
- 10) C2 **Q - What disease is caused by a tumor on the pituitary gland?**  
A – Cushings Disease  
S - EqSci (181)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Seven**

- 11) C3 **Q - What would happen if the umbilical cord were cut off too soon after birth?**  
A - The foal would be deprived of substantial quantities of blood  
S - Evans2 (595)
- 12) C4 **Q - What mineral excess causes a circular horizontal crack in the hoof walls?**  
A - Selenium excess  
S - Lewis2 (330)

**Toss-Up Questions**

- 13) **Q - What is the registry association for the American Standardbred?**  
A - United States Trotting Association  
S - AYHCLM (160-1)
- 14) **Q - Zinc toxicity causes what?**  
A - Anemia, swelling at the epiphyseal region of the long bones, stiffness and lameness  
S - Evans2 (234)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - Most foundation Quarter Horses trace back to what Thoroughbred, imported into Virginia in 1752?**  
A - Janus  
S - IDET (157)
- 16) **BONUS**  
**Q - List three (3) of the four (4) major factors that would cause a growing horse to develop DOD (developmental orthopedic diseases).**  
A - 1) rapid growth 2) trauma to the bone growth plates or articular cartilages 3) genetic predisposition 4) nutritional imbalances  
S - Lewis2 (283)
- 17) **Q - What process provides the energy for muscle contractions?**  
A - The breakdown of high-energy phosphate bonds in ATP  
S - EVANS2 (101)
- 18) **Q - What type of shoe is used on western pleasure horses to keep the feet closer to the ground, which allows the horse to have a freer, longer stride?**  
A - Aluminum  
S - HIH (515-4)
- 19) **Q - What is "histogenesis"?**  
A - The process of tissue formation  
S - EqSci (73)

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Seven

- 20) **TOSS-UP WITH BONUS ATTACHED**  
Q – What is a spasmodic muscle contraction that produces heat, especially in cold weather?  
A – Shivering  
S - EVANS2 (104)
- 21) **BONUS**  
Q – Blind staggers is caused by three (3) types of poisonings in horses. Name two (2) types.  
A - Locoweed, excess selenium and moldy corn poisoning  
S - Lewis2 (357)
- 22) **Q - From a reproductive standpoint, why are stallions put under artificial lights?**  
A - To increase testicular activity  
S - HIH (920-3)
- 23) **Q - What Spanish based breed of horse was used to formulate the Quarter Horse, the American Saddle Horse and the Tennessee Walking Horse breeds?**  
A - The Chicasaw  
S - EVANS2 (9)
- 24) **Q – What do the initials “EIPH” stand for?**  
A – Exercise Induced Pulmonary Hemorrhage  
S – EqSci (278)
- 25) **Q - Give another common name for Large Strongyles.**  
A – Bloodworms  
S - LEWIS2 (154)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
Q – Name the organization that was the first in the United States to set up an accurate identification system for horses.  
A – The Jockey Club  
S – EqSci (321)
- 27) **BONUS**  
Q – Name five (5) of the seven (7) committees of the American Horse Council.  
A – Government affairs, racing, showing, health and regulatory, animal welfare, recreation, and state horse council committee.  
S – HIH (1910-1)
- 28) **Q – What class of horses have the greatest calcium needs?**  
A – Young animals and lactating mares  
S – EVANS2 (226)
- 29) **Q – What type of insurance includes theft, transit and limited emergency colic surgery?**  
A – Equine Full Mortality  
S – EqSci (451)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**

**Sr. Round Seven**

- 30) **Q - How is the encephalitis virus transmitted to the horse?**  
A - By blood sucking arthropods, mainly mosquitoes  
S - LEWIS2 (169)
- 31) **Q - What gland is affected by a goiter?**  
A - Thyroid gland  
S - EVANS2 (233)
- 32) **Q - What is the only draft horse breed that originated in the United States?**  
A - American Cream Draft Horse  
S - HIH (163-1)

**END OF ROUND SEVEN**

2011 NC 4-H Horse Program  
District Horse Bowl Questions  
Sr. Round Eight

**One on One Questions**

- 1) C1 **Q – What supports and holds the tendons in place?**  
A - Anular Ligaments  
S - CAHA2 (35)
- 2) C2 **Q - Name the genetic disease that is a fatal disorder of Belgian horses and related European breeds that results in the birth of foals with skin and mouth lesions that are present or develop within the first few days of life.**  
A – JEB (Junctional Epydermolysis Bulosa)  
S - HIH (1095-2)
- 3) C3 **Q – What is substance that can be applied topically to control bleeding?**  
A – Silver Nitrate  
S - AYHCLM (109-4)
- 4) C4 **Q - What term refers to an excessive accumulation of cerebrospinal fluid?**  
A – Hydrocephalus  
S - CAHA2 (81)
- 5) C1 **Q - What disease is described as an incompatibility between the mare's and foal's blood group that results in foal anemia and destruction of the foal's red blood cells by the mare's immune system?**  
A - Neonataal isoerythrolysis or NI  
S - EqSci (102)
- 6) C2 **Q – In what state was the first American racetrack built?**  
A – New York  
S - Evans2 (117)
- 7) C3 **Q - What is a bowed tendon?**  
A – Inflammation of the superficial and/or deep digital flexor tendons sheaths resulting in swelling behind the cannon bones  
S - Lewis2 (383)
- 8) C4 **Q – What are the two (2) basic styles of traditional pack saddles?**  
A – Crossbuck and decker  
S – HIH (1125-1)
- 9) C1 **Q - What ligament connects the splint bone to the cannon bone?**  
A - The interosseous ligament  
S - IDET (154)
- 10) C2 **Q - Explain why foxtail barley and bristle grass are not desirable for horse pasture.**  
A – They can become embedded in the mucous membranes of the cheeks, tongue and gums; causing ulcers, excessive salivation and difficulty in eating.  
S - LEWIS2 (301)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Eight**

- 11) C3 **Q - What is thrombus?**  
A - Another name for an intravascular clot  
S - Evans2 (624)
- 12) C4 **Q - When rotating pastures, how long should horses be removed from the pasture before returning to the same pasture in order to maintain a good forage regrowth?**  
A - At least 4 weeks  
S - AYHCLM (220-5)

**Toss Up Questions**

- 13) **Q - The carpus consists of how many and what type of bones?**  
A - 8 short bones  
S - EVANS2 (97)
- 14) **Q - What enzyme is secreted by the pancreas into the small intestine and enhances protein digestion?**  
A - Trypsin  
S - LEWIS2 (407)
- 15) **TOSS-UP WITH BONUS ATTACHED**  
**Q - How many lobes make up the right and left lungs?**  
A - Right- 3, Left-2  
S - EVANS2 (105)
- 16) **BONUS**  
**Q - What are the seven (7) macrominerals required by the horse?**  
A - Calcium, chloride, magnesium, phosphorus, potassium, sodium, sulfur  
S - EqSci (131)
- 17) **Q - What is the medical term for inflammation of the intestines?**  
A - Enteritis  
S - Evans2 (557)
- 18) **Q - Name the chemical substance secreted by the blister beetle that is poisonous to the horse.**  
A - Cantharid  
S - AYHCLM (415-9)
- 19) **Q - At what university did the nation's first veterinary college open at in 1868?**  
A - Cornell University  
S - EqSci (14)

2011 NC 4-H Horse Program  
District Horse Bowl Questions

Sr. Round Eight

- 20) **TOSS-UP WITH BONUS ATTACHED**  
Q - Name one (1) activity in which a horse would use type IIB fibers.  
A – Sprinting, jumping or cutting  
S – EqSci (115)
- 21) **BONUS**  
Q - Name three (3) factors that can cause a mature horse to eat feces.  
A - high-grain diet, protein-deficient diet, boredom  
S - Lewis2 (376)
- 22) **Q – Fill in the blank. The trachea divides into the left and right \_\_\_\_\_ .**  
A – Bronchi  
S - EVANS2 (105)
- 23) **Q - What was the first association formed for an American breed of horse?**  
A - The American Saddlebred Horse Association  
S - HIH (156-1)
- 24) **Q - What is known as the volume of air inspired or expired during each breathing cycle and is approximately six (6) liters?**  
A – Tidal volume  
S - EVANS2 (109)
- 25) **Q – Specifically, why did Secretariat run faster than the average racehorse?**  
A – He spent less time with his legs in the stance and overlap phase. In other words, his legs completed their ground contact quicker and more time was spent in the suspension phase.  
S – EqSci (118)
- 26) **TOSS-UP WITH BONUS ATTACHED**  
Q - What is the clear, colorless fluid that is moved toward the venous system through a series of valves by pressure formed when muscles contract?  
A – Lymph  
S – EVANS2 (112)
- 27) **BONUS**  
Q –What are the three (3) joints of the hock?  
A –Tarsocrural or tibiotarsal, intertarsal, tarsometatarsal  
S – LEWIS2 (120)
- 28) **Q - How and why was the Cooperative Extension Service established?**  
A - Established by the Smith-Lever Act of 1914 as way to distribute new research information to the states  
S - HIH (130-1)
- 29) **Q – Foals are considered to be premature if they are born before how many days of gestation?**  
A – 320 days  
S – EqSci (275)

**2011 NC 4-H Horse Program**  
**District Horse Bowl Questions**  
**Sr. Round Eight**

- 30) **Q - What plant contains an anti-thiamine compound and may induce a thiamin deficiency in horses?**  
A – Bracken fern  
S – EVANS2 (242)
- 31) **Q – The oldest of American horse breeds, this light horse is compact and muscular, with a refined body and chiseled face. The foundation sire was named after his owner. What is the breed?**  
A – Morgan  
S – HIH (151-1,2)
- 32) **Q – What are the three (3) broad categories of infectious diseases?**  
A – Parasitic, bacterial and viral  
S – EqSci (276)

**END OF ROUND EIGHT**