

**2017 NC State Horse Bowl Contest  
Mixed Division Round 1**

- 1) Q: What is the general term for the physical appearance of an animal due to the arrangement of muscle, bone, and other body tissue?**

**A:** Conformation

**S:** AYHC 1st(220-1)
  
- 2) Q: Name the vice from the following description: due to boredom, the horse will grasp things like wood fences with the upper incisors and pull back swallowing gulps of air, which enter the stomach, not the lungs.**

**A:** Cribbing (do not accept wind sucking)

**S:** Newhor; Lewis 2nd(72; 386)
  
- 3) Q: What is the name for the western version of a standing martingale?**

**A:** Tie-down

**S:** AYHC 1st(1100-12)
  
- 4) Q: What is the correct name for the curved upper part of the horse's neck?**

**A:** Crest

**S:** Evans 2nd(142)
  
- 5) Q: What is the term used to describe the condition opposite to swayback?**

**A:** Roach back

**S:** Evans 2nd(152)
  
- 6) Q: What farrier's tool is used to level the hoof wall after it has been trimmed with the nippers?**

**A:** Rasp

**S:** AYHC 1st(530-2)

- 7) **Q: What do you call a foal that has not yet been weaned?**  
**A:** Suckling  
**S:** Newhor(258)
- 8) **Q: What are the semi-horny structures located on the medial side of the legs above the knees and on the lower portion of the hocks?**  
**A:** Chestnuts  
**S:** Evans 2nd(688)
- 9) **Q: Two part question: how many beats and what kind of movement constitutes a trot?**  
**A:** 2 beat, diagonal movement  
**S:** Evans 2nd(22)
- 10) **Q: What causes the horse to begin to grow their winter coat?**  
**A:** The shortening of the daylight hours  
**S:** AYHC 1st(420-1)
- 11) **Q: What is the primary method of parasite transmission?**  
**A:** Through the manure  
**S:** AYHC 1st(430-6)
- 12) **Q: What body system consists of a pair of kidneys and the ureters, bladder, and urethra?**  
**A:** Urinary system  
**S:** Evans 2nd(119)
- 13) **Q: Name the headpiece that includes the bit and other accessories used for control during riding or driving.**  
**A:** Bridle  
**S:** AYHC 1st(110-5)

**14) Q: Where would you find tactile hairs?**

**A:** Around the eyes, lips, and nose

**S:** Kainer(4)

**TOSS UP WITH A BONUS ATTACHED**

**15) Q: In what country did the American Saddlebred originate?**

**A:** United States

**S:** Evans 2nd(37)

**BONUS QUESTION**

**16) Q: Name 4 distinguishing characteristics of the Appaloosa.**

**A:** (1) Spotted coat pattern, (2) mottled skin, (3) white sclera, (4) vertically striped hooves

**S:** AYHC 1st(140-1)

**17) Q: What is the largest tissue mass in the horse's body?**

**A:** Muscle

**S:** Evans 2nd(99)

**18) Q: What is the name given to when a horse consumes standing vegetation?**

**A:** Grazing

**S:** Lewis 2nd(391)

**19) Q: What do you call the area between the fetlock joint and the coronary band?**

**A:** Pastern

**S:** Newhor(205)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: The distance and/or time from when a particular foot leaves the ground until that foot strikes the ground again is referred to as what?**

**A:** Stride

**S:** Evans 2nd(169)

### **BONUS QUESTION**

- 21) Q: Name 4 macrominerals required by the horse.**  
**A:** (1) Calcium, (2) chloride, (3) magnesium, (4) phosphorus, (5) potassium, (6) sodium, and (7) sulfur  
**S:** Griffiths(131)
- 22) Q: What is the proper term for the bulge on the head of an Arabian horse?**  
**A:** Jibbah  
**S:** Newhor(157)
- 23) Q: What is the name of the oldest ancestor of the modern horse?**  
**A:** Eohippus  
**S:** Newhor(97)
- 24) Q: On a bridle, what is the main function of a headstall?**  
**A:** To hold the bit evenly and comfortably in the horse's mouth  
**S:** AYHC 1st(1100-6)

### **TOSS UP WITH A BONUS ATTACHED**

- 25) Q: What is the most nutritious part of the hay?**  
**A:** Leaves  
**S:** AYHC 1st(740-6)

### **BONUS QUESTION**

- 26) Q: Give 5 characteristics of good-quality hay.**  
**A:** (1) Free of mold, dust, weeds and other foreign materials; (2) leafy with fine stems; (3) soft and pliable to the touch; (4) pleasant smell; (5) bright, green appearance  
**S:** Lewis 2nd(68)
- 27) Q: What term describes a horse that stands with the feet closer together than the limbs are at their origin?**  
**A:** Base narrow  
**S:** Newhor(25)

- 28) Q: What is the normal respiration rate of a mature horse at rest?**  
**A:** 8-16 breaths/minute  
**S:** Evans 2nd(108)
- 29) Q: What is the name of the highest point of the horse's shoulders that is defined as the bony protrusion between the neck and the back?**  
**A:** Withers  
**S:** Newhor(294)
- 30) Q: What is the term for the material used to cover the stall floor that provides comfort and absorbs moisture?**  
**A:** Bedding  
**S:** AYHC 1st(110-5)
- 31) Q: What is the single most important factor in selecting a horse? This characteristic forms the basis for movement, length of stride, and performance.**  
**A:** Balance  
**S:** AYHC 1st(220-5)
- 32) Q: What breed has a golden body with a white main and tail?**  
**A:** Palomino  
**S:** AYHCYL (B117-2)

**END OF ROUND 1**

**2017 NC State Horse Bowl Contest  
Mixed Division Round 2**

- 1) Q: Sharp points and hooks are problems associated with what part of the horse?**  
**A:** Teeth or mouth  
**S:** Kainer(48)
- 2) Q: The bone inside the hoof that resembles a small hoof is known as what?**  
**A:** Coffin bone  
**S:** Evans 2nd(686)
- 3) Q: What is the art of gymnastics on horseback?**  
**A:** Vaulting  
**S:** AYHC 1st(185D-1)
- 4) Q: What is the term given to an animal whose chromosomes carry two identical genes in a given allele pair? For example: EE (big E, big E)**  
**A:** Homozygous  
**S:** Griffiths(90)
- 5) Q: Name two kinds of lice that attack horses.**  
**A:** Sucking and biting  
**S:** AYHC 1st(415-6)
- 6) Q: This breed is known for its extreme elegance. They can either be 3-gaited or 5-gaited.**  
**A:** American Saddlebred  
**S:** AYHC 1st(156-1)
- 7) Q: Where is the the thickest point of the hoof wall?**  
**A:** At the toe  
**S:** Evans 2nd(695)

- 8) **Q: What coat color is unique to the Shetland Pony?**  
**A:** Silver Dapple  
**S:** Evans 2nd(59)
- 9) **Q: Name two types of horse trailer hitches.**  
**A:** (1) Gooseneck, (2) 5th wheel, (3) bumper-pull  
**S:** AYHCYL(301-1L)
- 10) **Q: The toe of the the hind foot contacting the toe or heel of the forefoot on the same side is called what?**  
**A:** Forging  
**S:** Newhor(112)
- 11) **Q: What breed is characterized by a curly coat and a mane and tail that sometimes shed in the summer and regrow in the fall?**  
**A:** Bashkir Curly  
**S:** Evans 2nd(57)
- 12) **Q: What is a horse who has never won a race called?**  
**A:** Maiden  
**S:** Evans 2nd(179)
- 13) **Q: What are the two main functions of the horse's mouth?**  
**A:** (1)Chew feed, (2) wet it with saliva  
**S:** Evans 2nd(190)
- 14) **Q: Give the name of the feeder or feeding enclosure that is accessible to the foal but not to the dam.**  
**A:** Creep feeder  
**S:** Newhor(72)

**TOSS UP WITH A BONUS ATTACHED**

- 15) **Q: What is the name for fermented forage plants used as a feedstuff?**  
**A:** Silage  
**S:** Lewis 2nd(403)

**BONUS QUESTION**

- 16) **Q: There are 5 basic gaits common to most horses. Name them.**  
**A:** (1) Walk, (2) trot or jog, (3) canter or lope, (4) gallop or run, (5) back  
**S:** Griffiths(69)
- 17) **Q: Where are the hard and soft palates found?**  
**A:** Mouth  
**S:** Evans 2nd(106-107)
- 18) **Q: Describe a horse that is "pigeyed."**  
**A:** A horse with an eye that is too small for the size of the head  
**S:** AYHC 1st(220-4)
- 19) **Q: What vice is described as a rhythmical back and forth swaying while standing in the stall?**  
**A:** Weaving  
**S:** Evans 2nd(184)

**TOSS UP WITH A BONUS ATTACHED**

- 20) **Q: Parasites that live in the internal organs, body cavities, and tissues are called what?**  
**A:** Internal parasites or endoparasites  
**S:** Evans 2nd(617)

**BONUS QUESTION**

- 21) **Q: What 3 bones are located in the horse's foot?**  
**A:** (1) Short pastern, (2) coffin bone, (3) navicular bone  
**S:** Evans 2nd(pg229)



**22) Q: Coldblooded horses trace their ancestry back to what type of horse?**

**A:** Heavy draft breeds

**S:** Newhor(61)

**23) Q: What is the name of the second cervical vertebrae?**

**A:** Axis

**S:** Evans 2nd(96)

**24) Q: Regardless of the type of horse, what kind of access to forage is recommended?**

**A:** Free choice

**S:** AYHC 1st(740-11)

#### **TOSS UP WITH A BONUS ATTACHED**

**25) Q: Where in the world did the modern horse, Equus, first appear?**

**A:** North America

**S:** Evans 2nd(5)

#### **BONUS QUESTION**

**26) Q: Horses have very keen senses. List the 5 senses.**

**A:** (1) Sight, (2) smell, (3) hearing, (4) touch, (5) taste

**S:** Griffiths(55)

**27) Q: What two breeds are crossed to produce an Anglo-Arab?**

**A:** (1) Arabian, (2) Thoroughbred

**S:** Evans 2nd(17)

**28) Q: What is the elastic, wedge-shaped mass that occupies the area between the bars of the foot?**

**A:** Frog

**S:** Evans 2nd(694)

- 29) Q: How many beats are in the gallop?**  
**A:** 4  
**S:** Griffiths(78)
- 30) Q: What is an animal that, when mature, is less than 56 inches tall?**  
**A:** Pony  
**S:** AYHC 1st(110-5)
- 31) Q: At what age would a foal commonly be weaned?**  
**A:** 4-6 months  
**S:** Evans 2nd(430)
- 32) Q: If a horse is unsettled in the trailer, what may be used to protect the horse's poll and other areas of the head?**  
**A:** Head bumper  
**S:** AYHCYL(101-2L)

**END OF ROUND 2**

## **2017 NC State Horse Bowl Contest Mixed Division Round 3**

- 1) Q: Identify the breed from the following description: this breed's progeny was essential in the development of the Standardbred, American Saddlebred, and Quarter Horse breeds. The U.S. Department of Agriculture had a farm in Middlebury, Vermont that was used to preserve and improve this breed. The horse is known for its all-purpose ability on the farm or in the show ring and it is the only breed named after a single horse.**

**A:** Morgan

**S:** Evans 2nd(36)
  
- 2) Q: What color is a relatively uniform mixture of white and black hairs on the body, typically with a darker head and lower legs?**

**A:** Blue roan

**S:** AYHC 1st(140-1)
  
- 3) Q: What term means "the study of the horse?"**

**A:** Hippology

**S:** Newhor(140)
  
- 4) Q: How many pairs of chromosomes does a horse have?**

**A:** 32 pairs

**S:** Newhor(56)
  
- 5) Q: What is the common name for the tarsal joint?**

**A:** Hock

**S:** Lewis 2nd(393)
  
- 6) Q: When in motion, there is sometimes a brief period of suspension for the horse. Describe the period of suspension.**

**A:** A brief moment when all 4 feet are off the ground

**S:** Griffiths(74)

- 7) **Q: What is the term for the mechanical technique to align and support the horse's stance or to change the timing of its gait?**  
**A:** Corrective shoeing  
**S:** AYHC 1st(515-1)
- 8) **Q: A young horse has a total of how many temporary teeth?**  
**A:** 24  
**S:** AYHC 1st(240-2)
- 9) **Q: What part of the horse is at particular risk for a puncture wound?**  
**A:** Hoof  
**S:** AYHC 1st(440-1)
- 10) **Q: What is another name for the parasite Strongyloides?**  
**A:** Threadworms  
**S:** AYHC 1st(430-2)
- 11) **Q: Under normal circumstances, how does the horse cool itself?**  
**A:** By sweating  
**S:** AYHC 1st(410-1)
- 12) **Q: What is the name of a rubber or leather ring that lies between the horse's cheek and the bit ring or shank to prevent pinching of the skin?**  
**A:** Bit guard  
**S:** Newhor(29)
- 13) **Q: Research indicates horses can see in color. Which color does the horse have the most difficulty seeing?**  
**A:** Red  
**S:** Griffiths(60)

**14) Q: There are 5 sections in the equine food pyramid. What nutrient class is found at the base of the pyramid?**

**A:** Water

**S:** AYHCYL(102-2)

**TOSS UP WITH A BONUS ATTACHED**

**15) Q: What vitamin is known as the "sunshine vitamin?"**

**A:** Vitamin D

**S:** Lewis 2nd(48)

**BONUS QUESTION**

**16) Q: Name 3 types of snaffle bits.**

**A:** (1) Round, (2) D-ring, (3) full cheek, (4) egg butt

**S:** AYHC 1st(1100-8)

**17) Q: What is the term used to describe the organic compounds containing nitrogen that are the building blocks of proteins?**

**A:** Amino acids

**S:** Lewis 2nd(380)

**18) Q: What is the term for excessive swayback of a horse?**

**A:** Lordosis

**S:** Newhor(172)

**19) Q: What is the scientific name of a horse?**

**A:** Equus caballus

**S:** Evans 2nd(449)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: Name the piece of tack from the following description: it is a Y-shaped strap with metal rings on the end through which the reins pass. The other end runs between the horse's front legs and attaches to the girth. It helps prevent the horse from tossing and raising its head.**

**A:** Running martingale

**S:** Newhor(176)

**BONUS QUESTION**

**21) Q: Name 3 exterior parts of the hoof.**

**A:** (1) Hoof wall, (2) white line, (3) sole, (4) frog, (5) bars, (6) sulcus, (7) periople

**S:** AYHC 1st(505-1)

**22) Q: What is the common name for the large metacarpal bone?**

**A:** Cannon bone

**S:** Kainer(12)

**23) Q: The horse used to accompany racehorses on the track to keep them calm is called what?**

**A:** Pony horse

**S:** Newhor(217)

**24) Q: After exercise why is it important to cool down a horse before allowing it to drink a large quantity of water?**

**A:** Consumption of too much water by a hot horse can result in colic and acute laminitis or founder

**S:** Lewis 2nd(147)

**TOSS UP WITH A BONUS ATTACHED**

**25) Q: What type of problem might a horse have if he is slobbering, tilting his head, and has difficulty chewing?**

**A:** Dental problems

**S:** AYHC 1st(405-1)

### **BONUS QUESTION**

**26) Q: Name 3 types of spavins.**

**A:** (1) Blind or occult spavin, (2) bog spavin, (3) blood spavin, (4) bone, true, or jack spavin

**S:** Lewis 2nd(404)

**27) Q: Name the 3 regions of the hoof wall.**

**A:** (1) Toe, (2) quarter, (3) heel

**S:** Kainer(24)

**28) Q: What breed of pony is used almost exclusively in harness?**

**A:** Hackney

**S:** Evans 2nd(61)

**29) Q: What term refers to the process of passing genetic material to the next generation?**

**A:** Inheritance

**S:** Griffiths(89)

**30) Q: What type of wounds have torn rather than cut edges and may be irregular in shape?**

**A:** Lacerations or tears

**S:** AYHCYL(B109-1L)

**31) Q: What is the scientific name for joint inflammation?**

**A:** Arthritis

**S:** AYHC 1st(450-5)

**32) Q: What is it called when a horse curls its upper lip and holds its head in the air?**

**A:** Flehmen response

**S:** Griffiths(62)

**END OF ROUND 3**

**2017 NC State Horse Bowl Contest  
Mixed Division Round 4**

- 1) Q: Hemoglobin and myoglobin contain large quantities of what mineral?**  
**A:** Iron  
**S:** Lewis 2nd(38)
- 2) Q: "Lockjaw" is a common term for which bacterial disease?**  
**A:** Tetanus  
**S:** Newhor(170)
- 3) Q: The forearm of the horse is composed of two bones. Name them.**  
**A:** (1) Radius, (2) ulna  
**S:** Evans 2nd(684)
- 4) Q: What word indicates a location toward the free end of a limb? In other words, this is a location further from the trunk or body.**  
**A:** Distal  
**S:** Kainer(2)
- 5) Q: What is another name for the afterbirth tissue?**  
**A:** Placenta  
**S:** Evans 2nd(421)
- 6) Q: What are the two classes of vitamins?**  
**A:** (1) Fat-soluble, (2) water-soluble  
**S:** Griffiths(122)
- 7) Q: In what region of the world was the donkey most likely domesticated?**  
**A:** Middle East or Egypt  
**S:** Griffiths(16)



- 8) **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:** AYHCYL(110-2)
- 9) **Q: What is another name for erythrocytes?**  
**A:** Red blood cells  
**S:** Evans 2nd(117)
- 10) **Q: Equine infectious anemia is diagnosed through the detection of antibodies to EIA in the horse's blood serum via what test?**  
**A:** Coggins test  
**S:** AYHC 1st(630-1)
- 11) **Q: What does "encephalitis" mean?**  
**A:** Inflammation of the brain  
**S:** AYHC 1st(625-1)
- 12) **Q: What mechanical action causes bot fly eggs to hatch?**  
**A:** The horse licking them  
**S:** AYHC 1st(415-5)
- 13) **Q: The most common cancer of the eye is squamous cell carcinoma. What two breeds are predisposed to developing this condition?**  
**A:** (1) Appaloosas, (2) Belgians  
**S:** AYHC 1st(465-2)
- 14) **Q: In reference to packing equipment, a pannier is used for what purpose?**  
**A:** To hold gear, food, and equipment  
**S:** AYHC 1st(1125-3)

**TOSS UP WITH A BONUS ATTACHED**

- 15) Q: The plantar ligament holds together the back of which joint?**  
**A:** Hock  
**S:** Evans 2nd(705)

**BONUS QUESTION**

- 16) Q: Name 3 different types of horse racing.**  
**A:** (1) Flat racing, (2) harness racing, (3) steeplechase, (4) chuck wagon racing, (5) chariot racing  
**S:** EVANS 2nd(20-31)
- 17) Q: What can be done to help encourage abscessed lymph nodes to rupture and drain?**  
**A:** Apply hotpacks or poultices  
**S:** AYHC 1st(615-1)
- 18) Q: What part of the body does the term "optic" refer to?**  
**A:** Eye  
**S:** Newhor(196)
- 19) Q: What does the term "non-contagious" mean?**  
**A:** Disease is not able to be spread from one animal to another  
**S:** Griffiths(167)

**TOSS UP WITH A BONUS ATTACHED**

- 20) Q: One of the main goals of wound treatment is to control hemorrhage. What is one benefit that hemorrhage provides?**  
**A:** It flushes the wound free of contaminating material  
**S:** AYHC 1st(440-2)

**BONUS QUESTION**

- 21) Q: Name 4 different walks that may be called for in a dressage test.**  
**A:** (1) Working (regular), (2) collected, (3) medium, (4) extended, (5) free  
**S:** Evans 2nd(172)

**22) Q: What is the name for the area in the horse's mouth where the bit rests?**

**A:** Interdental space or bars

**S:** Kainer(48)

**23) Q: What organ is being described? It is dark purple and glandular, with a soft consistency. It is oblong in shape and located near the stomach. It serves as reservoir for red blood cells and assists the body in combating infectious organisms.**

**A:** Spleen

**S:** Lewis 2nd(404)

**24) Q: What is the transparent membrane that covers the front of the eye?**

**A:** Cornea

**S:** Newhor(69)

#### **TOSS UP WITH A BONUS ATTACHED**

**25) Q: What fluid lubricates the eye?**

**A:** Lacrimal fluid

**S:** Evans 2nd(125)

#### **BONUS QUESTION**

**26) Q: Give two reasons why barn managers prefer giving water in buckets over commercial waterers.**

**A:** (1) A bucket is more easily cleaned, (2) water consumption can be observed, (3) water can easily be withheld if necessary

**S:** Evans 2nd(778)

**27) Q: What infection does *Streptococcus equi* cause?**

**A:** Strangles or distemper

**S:** AYHC 1st(445-6)

- 28) Q: What is the purpose of short bones?**  
**A:** To absorb concussion  
**S:** Evans 2nd(90)
- 29) Q: Define "nephritis."**  
**A:** Inflammation of the kidneys  
**S:** Newhor(189)
- 30) Q: What shoe would a farrier use to support the rear portion of the hoof in horses with navicular disease?**  
**A:** Egg bar  
**S:** AYHC 1st(515-4)
- 31) Q: The endocrine system consists of many of ductless glands. What do these glands produce?**  
**A:** Hormones  
**S:** Newhor(92)
- 32) Q: The mating of a chestnut with a cremello should produce offspring that are all what color?**  
**A:** Palomino  
**S:** Evans 2nd(67)

**END OF ROUND 4**

## **2017 NC State Horse Bowl Contest Mixed Division Round 5**

- 1) Q: The uterus is a multi-layered, hollow, Y-shaped organ. What two tough, sheet-like structures suspend the uterus within the body cavity?**

**A:** Broad ligaments

**S:** AYHC 1st(920-3)
  
- 2) Q: The deficiency of what mineral will likely cause rickets in a young horse?**

**A:** Phosphorus

**S:** Evans 2nd(229)
  
- 3) Q: How long does estrus, or a mare's heat period, last?**

**A:** 5-7 days

**S:** Kainer(71)
  
- 4) Q: The portal vein carries blood from the intestines to what organ?**

**A:** Liver

**S:** Kainer(54)
  
- 5) Q: What breed is afflicted by aniridia?**

**A:** Belgians

**S:** Griffiths(100)
  
- 6) Q: What is the recommended minimum height for perimeter fences on a horse facility?**

**A:** 5 feet

**S:** AYHC 1st(330-1)
  
- 7) Q: What is the best way to check capillary refill time?**

**A:** By pressing your finger against the horse's gum and holding for a few seconds, then release and see how long it takes for color to return to the horse's gum

**S:** Griffiths(163)

- 8) **Q: What do geneticists use to determine expected outcomes of a mating and to determine the percentage of expected offspring that should show a particular trait?**  
**A:** Punnett square  
**S:** Griffiths(92)
- 9) **Q: What hormone causes the receptive behavior patterns observed in mares during heat and acts to prepare the uterus for receiving an embryo?**  
**A:** Estrogen  
**S:** AYHC 1st(920-6)
- 10) **Q: What is a common name for the skin infection that develops on the back of the pastern as a result of standing in moist, dirty bedding or muddy conditions?**  
**A:** Grease heel, scratches, or mud fever  
**S:** Lewis 2nd(178)
- 11) **Q: What breed of horse is spotted and is often confused with the Appaloosa?**  
**A:** Rangerbred (do not accept POA - the question specifies "breed of horse")  
**S:** Evans 2nd(58)
- 12) **Q: Name the two functions of the ovaries.**  
**A:** (1) Produce hormones, (2) produce and release ova (eggs)  
**S:** Evans 2nd(317)
- 13) **Q: Simple sugars are known as what?**  
**A:** Monosaccharides  
**S:** Griffiths(145)
- 14) **Q: What are the small, irregularly shaped cell fragments responsible for blood clotting?**  
**A:** Platelets or thrombocytes  
**S:** AYHC 1st(830-1)

**TOSS UP WITH A BONUS ATTACHED**

**15) Q: Complex compounds that contain nitrogen and are comprised of amino acids are called what?**

**A:** Proteins

**S:** Newhor(221)

**BONUS QUESTION**

**16) Q: Give two reasons why you would put a hot poultice on a horse.**

**A:** 1) To increase blood supply to an injured area, 2) to draw out infection from an abscess or puncture wound, 3) to encourage an abscess to open

**S:** AYHC 1st(440-6)

**17) Q: Which type of vision is best for seeing long distance, but provides little detail or depth perception?**

**A:** Monocular

**S:** Griffiths(60)

**18) Q: To which phylum does the horse belong?**

**A:** Chordata

**S:** Evans 2nd(13)

**19) Q: What is the term for the substance the horse's immune system will produce in response to the presence of an antigen?**

**A:** Antibody

**S:** Newhor(12)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: What two things are necessary for bot eggs to hatch?**

**A:** (1) Friction, (2) moisture

**S:** AYHC 1st(430-3)

### **BONUS QUESTION**

- 21) Q: Name 4 of the 6 parts of the female reproductive tract.**  
**A:** (1) Vulva, (2) vagina, (3) cervix, (4) uterus, (5) oviducts, (6) ovaries  
**S:** AYHC 1st(920-1)
- 22) Q: As a foal matures, the area of the long bones known as the physis ossifies. What is the common term used to describe the physis?**  
**A:** Growth plate  
**S:** Kainer(13)
- 23) Q: When talking about chromosomes, what does the term "haploid" mean?**  
**A:** Half  
**S:** Griffiths(88)
- 24) Q: What is the best and safest type of wire to use for fencing for horses?**  
**A:** Five diamond V-mesh wire  
**S:** AYHC 1st(350-3)

### **TOSS UP WITH A BONUS ATTACHED**

- 25) Q: Fetal development is greatest during which trimester?**  
**A:** Third  
**S:** AYHC 1st(940-2)

### **BONUS QUESTION**

- 26) Q: Name a wild or feral horse in each of these geographic areas: Australia, the western plains of North America, and the coast of Virginia.**  
**A:** (1) Australia - Brumby, (2) the western plains of North America - Mustang, (3) the coast of Virginia - Chincoteague Pony  
**S:** Newhor(41,55,184)
- 27) Q: Megacolon is a genetic lethal condition that is also known as what?**  
**A:** Lethal white foal syndrome  
**S:** Griffiths(98)



- 28) Q: What is the common name for equine encephalomyelitis?**  
**A:** Sleeping sickness  
**S:** Evans 2nd(599)
- 29) Q: What type of joint is the elbow?**  
**A:** Hinge joint or ginglymus  
**S:** Evans 2nd(688)
- 30) Q: What vitamin, fed along with selenium, helps prevent white muscle disease?**  
**A:** Vitamin E  
**S:** Evans 2nd(241)
- 31) Q: What are the tubes that carry urine from the kidneys to the bladder called?**  
**A:** Ureters  
**S:** Evans 2nd(119)
- 32) Q: Which sex of the horse that can become a long term carrier of equine viral arteritis.**  
**A:** Stallion or male  
**S:** AYHC 1st(620-1 & 2)

**END OF ROUND 5**

**2017 NC State Horse Bowl Contest  
Mixed Division Round 6**

- 1) Q: Leutinizing hormone, follicle stimulating hormone, and oxytocin are secreted from what gland located at the base of the brain?**  
**A:** Pituitary gland  
**S:** Lewis 2nd(400)
- 2) Q: Describe a blood spavin.**  
**A:** An abnormally swollen vein on the front of the hock  
**S:** Evans 2nd(95)
- 3) Q: What breed does the disease HERDA, or hyperelastosis cutis, mostly commonly afflict?**  
**A:** Quarter Horses  
**S:** AYHC 1st(675-1)
- 4) Q: Two part question: what is a cataract and what does it cause?**  
**A:** (1) Cloudiness of the lens in the eye, (2) it results in blindness  
**S:** AYHC 1st(1060-5)
- 5) Q: What 2 substances are produced by the testicles?**  
**A:** (1) Sperm, (2) testosterone  
**S:** AYHC 1st(980-1)
- 6) Q: What breed descended from the survivors of a shipwreck off the coast of Virginia?**  
**A:** Chincoteage Pony  
**S:** Newhor(55)
- 7) Q: How many players are on a polo team?**  
**A:** 4  
**S:** Evans 2nd(163)

- 8) **Q: Which animal is a reservoir for the protozoa that causes Equine Protozoal Myeloencephalitis?**  
**A:** Opossum  
**S:** Griffiths(174)
- 9) **Q: What is a failure of muscular coordination resulting in stumbling, weaving, or a drunken-type gait known as?**  
**A:** Ataxia  
**S:** Lewis 2nd(381)
- 10) **Q: The meconium must be passed by the foal within 12 hours after birth. What should be done if this does not occur?**  
**A:** Give the foal an enema  
**S:** Evans 2nd(428)
- 11) **Q: What is the only draft horse breed that originated in the United States?**  
**A:** American Cream Draft Horse  
**S:** AYHC 1st(163-1)
- 12) **Q: Where are the submandibular lymph glands located?**  
**A:** Under the jaw  
**S:** AYHC 1st(610-1)
- 13) **Q: Describe a 'tostado' colored horse.**  
**A:** Red coat color with dark red points  
**S:** Griffiths(41)
- 14) **Q: Which nutrient is responsible for the formation of tissue, hormones, enzymes, and antibodies?**  
**A:** Protein  
**S:** AYHC 1st(720-1)

**TOSS UP WITH A BONUS ATTACHED**

**15) Q: How long is the life cycle of the bot fly?**

**A:** 1 year

**S:** Lewis 2nd(158)

**BONUS QUESTION**

**16) Q: Name, in order, the 5 major forms of the horse as it evolved to the modern day horse.**

**A:** (1) Prehorse, (2) eohippus, (3) mesohippus, (4) merychippus, (5) pliohippus

**S:** Griffiths(9)

**17) Q: When cantering, the last foot to hit the ground indicates what?**

**A:** What lead the horse is on

**S:** Griffiths(75)

**18) Q: Where are two places that you can observe the horses mucous membranes.**

**A:** (1) Inner eyelids, (2) inside the nostrils, (3) inner lips and gums, (4) inside the vulva

**S:** AYHC 1st(425-2)

**19) Q: Two part question: what are alleles and where are they located?**

**A:** (1) Nonidentical genes, (2) they are found on the same physical position of a chromosome

**S:** Newhor(10)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: How many toes did eohippus have on each foot?**

**A:** 4 toes on the front feet and 3 toes on the hind feet

**S:** Griffiths(6)

**BONUS QUESTION**

**21) Q: Name 3 characteristics of a cremello horse.**

**A:** (1) Pink skin, (2) blue eyes, (3) basic coat color is cream

**S:** Griffiths(43)

- 22) Q: What is the parasite of horses commonly known as "bloodworms?"**  
**A:** Strongyles  
**S:** Griffiths(188)
- 23) Q: Of the 3 species of bots, which one is the most common?**  
**A:** Gasterophilus intestinalis  
**S:** Evans 2nd(635)
- 24) Q: What is the fibro-elastic structure that acts as a shock absorber for the hoof?**  
**A:** Digital cushion  
**S:** Evans 2nd(696)

**TOSS UP WITH A BONUS ATTACHED**

- 25) Q: A green coloring to hay indicates high levels of what fat-soluble vitamin?**  
**A:** Vitamin A  
**S:** AYHC 1st(740-7)

**BONUS QUESTION**

- 26) Q: Name the breed of each of these 4 famous stallions: Dan Patch, Figure, Man O' War, and Steel Dust.**  
**A:** (1) Dan Patch - Standardbred, (2) Figure - Morgan, (3) Man O' War - Thoroughbred, (4) Steel Dust - Quarter Horse  
**S:** Evans 2nd(22, 25, 29, 36)
- 27) Q: What term defines a mature sex cell?**  
**A:** Gamete  
**S:** Newhor(118)
- 28) Q: Where are the intercostal muscles located?**  
**A:** Between the ribs  
**S:** AYHC 1st(895-1)

**29) Q: What immunization is especially important for a pregnant mare and should be given during the 5th, 7th and 9th month of pregnancy?**

**A:** Rhinopneumonitis

**S:** AYHC 1st(445-3)

**30) Q: Horses with this disease can easily be identified by hirsutism, or a long, wavy, non-shedding hair coat.**

**A:** Cushing's disease or pituitary pars intermedia dysfunction

**S:** AYHC 1st(795-3)

**31) Q: What is the horse's largest gland?**

**A:** Liver

**S:** Kainer(54)

**32) Q: What disease in horses is similar to HIV in humans?**

**A:** Equine Infectious Anemia or EIA

**S:** AYHC 1st(630-1)

**END OF ROUND 6**

## **2017 NC State Horse Bowl Contest Mixed Division Round 7**

- 1) Q: What part of the brain is responsible for interpreting daylight length and temperature and for signaling the start of the reproductive season?**

**A:** Hypothalamus

**S:** AYHC 1st(920-6)
  
- 2) Q: In reference to horses, what are the two meanings of the term "haw?"**

**A:** (1) A third eyelid or membrane in front of the eye, (2) a teamster's term signaling a turn to the left

**S:** Newhor(130)
  
- 3) Q: What part of the horse's digestive tract has the largest capacity?**

**A:** Large colon

**S:** AYHCLM(303-2)
  
- 4) Q: When interpreting equine insurance policies, what is a post-mortem requirement?**

**A:** The requirement that a licensed veterinarian must perform a post-mortem examination, or necropsy, of a horse upon its death

**S:** AYHC 1st(1340-3)
  
- 5) Q: What is it called when fluid, called lymph, accumulates in a horse's lower limbs due to lack of exercise or movement that is needed to force the upward flow of lymph?**

**A:** Stocking up or leg edema

**S:** Kainer; Newhor(64; 166)
  
- 6) Q: Give another name for epinephrine.**

**A:** Adrenaline

**S:** Newhor(98)

- 7) **Q: What substance is used to inactivate and bond to ingested toxins to prevent their absorption to the intestinal tract?**  
**A:** Activated charcoal  
**S:** Newhor(3)
- 8) **Q: What is "agalactia?"**  
**A:** The condition in which the mare produces no milk  
**S:** AYHC 1st(940-2)
- 9) **Q: What type of race equalizes the chances of winning by assigning weights as follows: the heaviest weights are given to the horses with the best performance records and the lightest weights are given to the horses with the poorest performance records?**  
**A:** Handicap  
**S:** Newhor(129)
- 10) **Q: In what country did the Halflinger originate?**  
**A:** Austria  
**S:** Evans 2nd(74)
- 11) **Q: Myoglobin is a ferrous-complex pigment that gives muscle its characteristic color and acts as a store for oxygen. What disease results when muscles are damaged and cellular byproducts, including myoglobin, are released, resulting in coffee-colored urine?**  
**A:** (1) tying up-syndrome, (2) Monday morning sickness, (3) rhabdomyolysis, (4) azoturia, (5) recurrent or chronic exertional rhabdomyolysis, (6) equine exertional myopathy, (7) black water disease, (8) polysaccharide storage myopathy (PSSM), (9) severe dehyd  
**S:** Newhor(185)
- 12) **Q: Equine encephalomyelitis, or sleeping sickness, can be categorized by 3 antigenically different arborvirus strains. Name them.**  
**A:** (1) Eastern or EEE, (2) Western or WEE, (3) Venezuelan or VEE  
**S:** Lewis 2nd(169)



**13) Q: Of the horse's 205 bones, how many are located in the legs?**

**A:** 80 (20 in each limb)

**S:** Kainer(plate 6)

**14) Q: Define "bascule."**

**A:** Desirable arc in a horse's body as it goes over a jump

**S:** Newhor(24)

#### **TOSS UP WITH A BONUS ATTACHED**

**15) Q: What term can pertain to the heart and is also the name of the area or band encircling the hoof where it joins the leg?**

**A:** Coronary

**S:** Newhor(69)

#### **BONUS QUESTION**

**16) Q: Horses belong to the order perissodactyla. What are the 3 qualities that members of this order must possess?**

**A:** (1) Odd number of toes, (2) hooved, (3) non-ruminant

**S:** Griffiths(15)

**17) Q: The esophageal sphincter muscle is responsible for the inability of the horse to do what 2 things?**

**A:** (1) Vomit, (2) burp

**S:** Griffiths(110)

**18) Q: What two minerals make up 70% of the horse's body?**

**A:** (1) Calcium, (2) phosphorus

**S:** Lewis 2nd(26)

**19) Q: Between what two joints is the tibia found?**

**A:** (1) Stifle, (2) hock

**S:** Newhor(268)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: What bit is a combination of a snaffle bit and a very mild curb-action bit that does not have shanks, but rather has loops at the top of the rings for the attachment to the bridle and for a curb chain?**

**A:** Kimberwick

**S:** Newhor(161)

**BONUS QUESTION**

**21) Q: Name the 5 categories of organisms that cause infectious diseases in horses.**

**A:** (1) Bacteria, (2) virus, (3) rickettsia, (4) fungus, (5) protozoa

**S:** Griffiths(168)

**22) Q: What is a stone-like mass that forms around a foreign object in the intestines?**

**A:** Enterolith

**S:** Newhor(93)

**23) Q: Which of the 5 classes of nutrients make up only 1% of the horse's dietary needs?**

**A:** Vitamins

**S:** Griffiths(115)

**24) Q: Snails are an intermediate host for the vector that carries what disease?**

**A:** Potomac Horse Fever

**S:** AYHC 1st(445-11)

**TOSS UP WITH A BONUS ATTACHED**

**25) Q: After collecting semen from a stallion, at what temperature does it need to be held at in the incubator or water bath?**

**A:** 100 degrees Fahrenheit

**S:** Evans 2nd(378)

## **BONUS QUESTION**

- 26) Q: Name 4 physical differences between the ass and the horse.**  
**A:** (1) Asses have smaller, more upright hooves, (2) the ass's manes and tails are shorter and thinner than the horse's, (3) asses do not have chestnuts on the hind legs, (4) the ass's voice is louder and deeper  
**S:** Griffiths(21)
- 27) Q: What are the lateral cartilages?**  
**A:** Wing-like structures attached to the sides, or "wings," of the coffin bone  
**S:** AYHC 1st(505-4)
- 28) Q: A horse is considered what if the bars of its mouth have become toughened and the nerves deadened because of excessive pressure from the reins, therefore making it unresponsive to the bit?**  
**A:** Hard-mouthed  
**S:** Newhor(130)
- 29) Q: Mosquitoes are common vectors for equine encephalomyelitis. Give an example of a non-living vector that can transmit equine encephalomyelitis.**  
**A:** Hypodermic needle  
**S:** Griffiths(169)
- 30) Q: Two part question: name the two gaits of harness racehorses and tell which of the two gaits is faster.**  
**A:** 1) Pace and trot, (2) the pace is faster  
**S:** Griffiths(79)
- 31) Q: What disease causes abnormal bone growth that affects the horse's joints and may cause cyst-like lesions of the bone or flat areas of joints?**  
**A:** Osteochondrosis  
**S:** Griffiths(101)

**32) Q: What is the name of a maneuver or gait characterized by a high-action, collected trot in place with a long period of suspension?**

**A: Piaffe**

**S: Newhor(211)**

**END OF ROUND 7**

## **2017 NC State Horse Bowl Contest Mixed Division Round 8**

- 1) Q: When hay is baled too dry and the leaves fall off or shatter, what nutrient is lost?**  
**A:** Protein  
**S:** AYHC1st; Lewis2(740-6; 68)
- 2) Q: What famous American Saddlebred was the six-time winner of the \$10,000 Five-Gaited Championship at the Kentucky State Fair?**  
**A:** Wing Commander  
**S:** Evans 2nd(39)
- 3) Q: How does the diameter of the mouthpiece affect the severity of a bit?**  
**A:** The thicker the mouthpiece, the milder the bit or thinner mouthpieces are more severe  
**S:** AYHC 1st(1100-8)
- 4) Q: In reference to first aid, what is an avulsion?**  
**A:** A wound characterized by tearing of skin to cause a loose flap  
**S:** Evans 2nd(609)
- 5) Q: What is a fecal egg count?**  
**A:** A laboratory procedure used to determine the number of parasite eggs in a fecal sample  
**S:** Evans 2nd(647)
- 6) Q: A blistering agent is a medication that causes redness and inflammation. Why would this be used?**  
**A:** To increase circulation  
**S:** Newhor(32)

- 7) **Q: Two part question: what is the artery located in the neck and to where does it go?**  
**A:** (1) Carotid artery, (2) to the head  
**S:** Griffiths(208)
- 8) **Q: What do you call the act of seizing or grasping, as when the horse grasps food with the lips?**  
**A:** Prehension  
**S:** Newhor(220)
- 9) **Q: Trismus is a condition seen in horses with tetanus. What is the more common name of the condition that is also a slang term for the disease?**  
**A:** Lockjaw  
**S:** Newhor(170)
- 10) **Q: A bellyband, hame chain, tug stop, and breeching are all parts of what equipment?**  
**A:** Harness  
**S:** Newhor(1900-5)
- 11) **Q: What is the degeneration of the specific cells in the cerebellum which results in incoordination?**  
**A:** Cerebellar ataxia  
**S:** AYHC 1st(1060-5)
- 12) **Q: What are two detrimental effects of mold in feed?**  
**A:** (1) Decrease in the nutrient value, (2) decrease in palatability, (3) causes respiratory problems from inhaled spores, (4) toxicity  
**S:** Lewis 2nd(101)
- 13) **Q: What is one method for testing immunoglobulin concentration in colostrum?**  
**A:** Colostrometer or agglutination test  
**S:** Evans 2nd(427)

**14) Q: Where is copper regulated and stored in the horse's body?**

**A:** Liver

**S:** Lewis 2nd(35)

#### **TOSS UP WITH A BONUS ATTACHED**

**15) Q: Stomach worms cause what major problem in the horse?**

**A:** Inflammation and skin wounds, called summer sores, around the eyes, lips, and nostrils where the larvae are deposited

**S:** Lewis 2nd(158)

#### **BONUS QUESTION**

**16) Q: Several genetic diseases are linked to specific breeds of horses. Name 4 of these genetic diseases and the breed in which they are found.**

**A:** (1) Lethal white foal syndrome or LWFS - American Paint Horse, (2) hyperkalemic periodic paralysis or HYPP - Quarter Horses, (3) combined immunodeficiency or CID - Arabians, (4) equine night blindness or ENB - Appaloosas, (5) aniridia - Belgians, (6) HERD

**S:** Griffiths; AYHC1st(98-100; 675; 1095-3)

**17) Q: Where is the primary location of fiber digestion?**

**A:** Cecum

**S:** Griffiths(112)

**18) Q: A flash noseband is a cross between what two nosebands?**

**A:** (1) Cavesson, (2) figure 8

**S:** Newhor(109)

**19) Q: In what type of event would a "stone boat" be used?**

**A:** Draft horse pulling competitions

**S:** Newhor(257)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: The term "swing team" refers to what?**

**A:** The middle pair of horses in a six horse hitch

**S:** Newhor(261)

**BONUS QUESTION**

**21) Q: Name 3 facts about a National Show Horse.**

**A:** (1) Originated in the U.S. (2) cross between the Saddlebred and Arabian, (3) known for refinement, stamina, and high-stepping action, (4) common uses are show ring under saddle and halter

**S:** Newhor(188)

**22) Q: Define the term "idiopathic."**

**A:** Arising from an unknown cause

**S:** Newhor(149)

**23) Q: PSSM, or polysaccharide storage myopathy, is a genetic trait that causes which condition?**

**A:** (1) Rhabdomyolysis, (2) tying up, (3) Monday Morning Sickness, (4) azoturia

**S:** Griffiths(101)

**24) Q: The term "blepharospasm" indicates severe pain in which part of the body?**

**A:** Eye

**S:** AYHC 1st(465-2)

**TOSS UP WITH A BONUS ATTACHED**

**25) Q: This is an agent that occurs in crystal form and has a bitter taste. It may be given as a diuretic or applied externally to produce blistering. It is the toxin found in blister beetles.**

**A:** Cantharadin

**S:** Newhor(47)



### **BONUS QUESTION**

- 26) Q: Name 3 endocrine glands that occur in pairs.**  
**A:** (1) Adrenal glands, (2) ovaries, (3) testes  
**S:** Griffiths(213)
- 27) Q: What is the scientific name for the breastbone?**  
**A:** Sternum  
**S:** Newhor(255)
- 28) Q: Name the groove on each side of the neck just above the windpipe.**  
**A:** Jugular groove  
**S:** Newhor(178)
- 29) Q: Name the disease from the following description: this disease is a paralytic disease that causes death by asphyxiation due to rigidity of the respiratory muscles. It is caused by a toxin produced by soil bacterium and horses with puncture wounds are at a**  
**A:** Tetanus  
**S:** Newhor(265)
- 30) Q: What is the name of the stallion that was designated as the foundation sire for the Tennessee Walking Horse Breeders Association in 1935?**  
**A:** Allan F-1 or Black Allan  
**S:** Evans2(40)
- 31) Q: What is the function of the nictitating membrane in the horse?**  
**A:** It wipes foreign matter from the eye  
**S:** Evans 2nd(126)
- 32) Q: What joint is commonly referred to as the "yes-no joint?"**  
**A:** Atlas-axis joint  
**S:** Evans2(96)

**END OF ROUND 8**

**2017 NC State Horse Bowl Contest  
Mixed Division Round 9**

- 1) Q: A steeplechase is a race over natural or artificial obstacles. How did it get its name?**  
**A:** In the late 1700s, the races often went from one church to another  
**S:** Newhor(255)
- 2) Q: Flexor tendons in what specific joint “unlock” the fixed position of the stay apparatus in the hind legs?**  
**A:** Stifle  
**S:** Kainer(36)
- 3) Q: When discussing rations and the horse's diet, how is energy measured and expressed?**  
**A:** Calories  
**S:** Griffiths(149)
- 4) Q: What bit may be used as a snaffle bit or a curb bit and is commonly used on heavy harness or plow horses?**  
**A:** Liverpool  
**S:** Newhor(170)
- 5) Q: A single dilution of the chestnut coat color results in a palomino. What color appears when there is a double dilution of chestnut?**  
**A:** Cream or cremello  
**S:** Evans2(81)
- 6) Q: What is another name for a "neoplasm?"**  
**A:** Tumor  
**S:** Newhor(189)

- 7) **Q: At what time of day do mosquitoes commonly feed on horses?**  
**A:** At dusk  
**S:** AYHCYL(100-1L)
- 8) **Q: What specific organ receives oxygenated blood from the left gastric artery?**  
**A:** Stomach  
**S:** Kainer(60)
- 9) **Q: The small intestine absorbs what kinds of vitamins?**  
**A:** Fat-soluble  
**S:** Griffiths(111)
- 10) **Q: Your horse has chronic obstructive pulmonary disease. To help manage this condition, it is helpful to do what before feeding your horse hay?**  
**A:** Soak the hay for 5 minutes before feeding or wet down the hay before feeding  
**S:** Lewis 2nd(291-292)
- 11) **Q: What is the translated meaning for the Spanish term "grulla?"**  
**A:** Blue crane  
**S:** Evans 2nd(51)
- 12) **Q: What is the name of the fluid that lubricates the joints?**  
**A:** Synovial fluid  
**S:** Evans2(90)
- 13) **Q: You do the math: approximately 75% of a horse's total body weight is made up of water. If your horse weighs 1000 pounds, how much of this total weight is water?**  
**A:** 750 pounds  
**S:** Griffiths(115)
- 14) **Q: Name two body systems that contain cilia.**  
**A:** (1) Respiratory, (2) female reproductive  
**S:** Kainer; AYHC 1st(67; 910-4)

**TOSS UP WITH A BONUS ATTACHED**

**15) Q: Healthy horses usually have what body condition score using the Henneke scale?**

**A:** 6-Apr

**S:** AYHC 1st(780-1)

**BONUS QUESTION**

**16) Q: List 3 symptoms of equine Cushing's disease.**

**A:** (1) Abnormal hair coat, (2) lack of ability to shed hair, (3) frequent urination, (4) ravenous appetite, (5) obesity, (6) excessive drinking of water, (7) muscle weakness, (8) depressed attitude, (9) bulging pad of fat above the eyes, (10) lowered immune

**S:** Griffiths(181)

**17) Q: In reference to horses give two definitions of the term "bolt."**

**A:** (1) To eat fast, (2) to take off, running straight ahead

**S:** Lewis 2nd(382)

**18) Q: In feed processing, what is the term for grain that passes through rollers with corrugated surfaces?**

**A:** Crimping

**S:** AYHCYLM(202-2)

**19) Q: In reproduction, artificial lighting is used to prolong estrus in the winter and hasten the onset of estrus in the early spring. For what other purpose might a horseman use artificial lighting?**

**A:** To promote shedding and to maintain show coats

**S:** Newhor(16)

**TOSS UP WITH A BONUS ATTACHED**

**20) Q: What breed of horse is known for the termino, a flowing movement in which the forelegs roll to the outside as the horse strides forward?**

**A:** Peruvian Paso

**S:** Evans2(43)

**BONUS QUESTION**

**21) Q: What are the 4 B-complex vitamins that do not have assigned numbers?**

**A:** (1) Biotin, (2) folic acid, (3) niacin, (4) pantothenic acid

**S:** Griffiths(128)

**22) Q: Referring to horse anatomy, what is the "globe?"**

**A:** Eyeball

**S:** Griffiths(60)

**23) Q: Anaerobic energy production would result in an increase in muscle soreness due to accumulation of what substance?**

**A:** Lactic acid

**S:** Lewis 2nd(380)

**24) Q: South American horse people do a more precise job than North Americans in describing the chestnut coat color. What South American term refers to a red-colored horse with matching red points?**

**A:** Alazán

**S:** Griffiths(41)

**TOSS UP WITH A BONUS ATTACHED**

**25) Q: If the Galvayne's groove is about half-way down the tooth of a horse, approximately how old is this horse?**

**A:** 15 years old

**S:** Griffiths(217)

## **BONUS QUESTION**

- 26) Q: Name 4 things to consider when choosing bedding for your stalls.**  
**A:** (1) Availability, (2) cost, (3) absorption capacity, (4) ease of clean-up and disposal, (5) ease of handling, (6) comfort to the horse (texture and size), (7) non-allergenic source, (8) fertility value of the resulting compost  
**S:** AYHC 1st(330-2)
- 27) Q: Bones are classified as long, short, flat, and irregular. Which type of bone encloses the cavities containing the vital organs?**  
**A:** Flat  
**S:** Evans2(90)
- 28) Q: What is the common name for magnesium sulfate, which is used as a foot soak to promote the drainage of a hoof abscess?**  
**A:** Epsom salts  
**S:** AYHC 1st(540-2)
- 29) Q: Pulmonary circulation refers to oxygenated and unoxygenated blood that circulates between the heart and what organ?**  
**A:** Lungs  
**S:** Evans2(111)
- 30) Q: A gene characteristic that, during meiosis, produces only one kind of gamete is called what?**  
**A:** Homozygous dominant  
**S:** Newhor(141)
- 31) Q: A deficit of what basic nutrient may increase the risk of impaction colic?**  
**A:** Water  
**S:** Griffiths(116)

**32) Q: Strangles is a disease caused by bacteria whose symptoms include nasal discharge and fever. How did it get its name?**

**A:** The lymph glands in the neck may swell so severely that it can restrict the horse's breathing

**S:** Newhor(257)

**END OF ROUND 9**

**2017 NC State Horse Bowl Contest  
Mixed Division Extra Toss Up Questions**

- 1) Q: What is a horse that is less than 6 months old called?**  
**A: Foal**  
**Source: AYHC 1st(110-5)**
  
- 2) Q: This is the mouthpiece of the bridle used while riding or driving.**  
**A: Bit**  
**Source: AYHC 1st(110-5)**
  
- 3) Q: What is the primary function of the sole?**  
**A: Protection**  
**Source: AYHC 1st(505-2)**
  
- 4) Q: Where does air enter a horses respiratory system?**  
**A: The nostrils**  
**Source: AYHC 1st(810-1)**
  
- 5) Q: What are the three basic types of bits?**  
**A: Snaffle,curb,and hackamore**  
**Source: AYHC 1st(1100-8)**
  
- 6) Q: What term describes the stabilization of the joints of the fore and hind limbs by ligaments and tendons which permits the horse to stand while sleeping?**  
**A: The Stay mechanism or Stay apparatus**  
**Source: Kainer(21, 36)**
  
- 7) Q: What is the basic unit of inheritance?**  
**A: The gene**  
**Source: AYHC 1st(1020-1)**



- 8) **Q: What is the only breed of horse in America to be named after an individual animal?**  
**A:** The Morgan Horse  
**Source:** Evans 2nd(36)
- 9) **Q: How many teats are on the mare's udder?**  
**A:** 2  
**Source:** Evans 2nd(322)
- 10) **Q: What are the two main functions of the equine digestive tract?**  
**A:** Digestion and absorption  
**Source:** Griffiths(108)
- 11) **Q: The sheath of the penis is known as what?**  
**A:** Prepuce  
**Source:** Kainer(4)
- 12) **Q: The Nez Perce tribe were the first to breed horses for specific traits. Those horses became known as what breed?**  
**A:** Appaloosa  
**Source:** AYHC 1st(152B-1)
- 13) **Q: What are the tiny, folded, accordion like, interlocking projections that connect the coffin bone to the hoof wall?**  
**A:** The laminae  
**Source:** AYHC 1st(455-1)
- 14) **Q: What divides the nasal cavity into halves?**  
**A:** Nasal septum  
**Source:** Kainer(42)

- 15) **Q: What is nettlerash?**  
**A:** Hives  
**Source:** Newhor(190)
- 16) **Q: Name three types of saddles considered "forward seat"**  
**A:** All purpose, close contact, dressage  
**Source:** AYHC 1st(1100-1)
- 17) **Q: The swelling of the palmar recess of the fetlock joint capsule are called what?**  
**A:** Wind-puffs  
**Source:** Kainer(14)
- 18) **Q: What is the technical word for release of the egg cell from the ovarian follicle?**  
**A:** ovulation  
**Source:** Kainer(71)
- 19) **Q: Which type of hay has the highest calcium content?**  
**A:** Alfalfa  
**Source:** Lewis 2nd(142)
- 20) **Q: What term is used to describe the condition when a horse's respiration rate is higher than its pulse rate?**  
**A:** Inversion  
**Source:** AYHC 1st(425-1)
- 21) **Q: How is Borrelia burgdorferi most commonly transferred?**  
**A:** Ticks  
**Source:** AYHC 1st(655-1)

- 22) **Q: What are the alveoli?**  
**A:** Functional units of the lung where gas exchange between oxygen and carbon dioxide actually occurs  
**Source:** AYHC 1st(810-1)
- 23) **Q: Name the wedge-shaped area of the ovary from which ova are released.**  
**A:** Ovulation fossa  
**Source:** AYHC 1st(910-4)
- 24) **Q: What is another name for the episoplasty procedure where the vulva is artificially sealed by suturing the labia together?**  
**A:** Caslick operation  
**Source:** AYHC 1st(910-1)
- 25) **Q: In which epoch did the first member of the horse family originate?**  
**A:** Eocene  
**Source:** Evans 2nd(4)
- 26) **Q: What is the main difference between the Spanish Jennet and the donkey?**  
**A:** Spanish Jennet is a breed of horse  
**Source:** Evans 2nd(43)
- 27) **Q: What is micturition?**  
**A:** urination  
**Source:** Evans 2nd(119)
- 28) **Q: What medication is used to treat bradycardia?**  
**A:** Atropine  
**Source:** Newhor(17)

**29) Q: What is an exophthalmos?**

**A:** Protruding eyeball

**Source:** Newhor(101)

**30) Q: What term defines the inadequate exchange of oxygen and carbon dioxide?**

**A:** Hypoventilation

**Source:** Newhor(147)

**2017 NC State Horse Bowl Contest  
Senior Division Extra Toss Up Questions**

- 31) Q: What is the purpose of a Forssell's operation?**  
**A:** To prevent cribbing  
**Source:** Newhor(113)
- 32) Q: What are the percentages of the offspring's coat colors that would result in repeated mating between a palomino and another palomino?**  
**A:** 25% chestnut, 50% palomino, 25% cremello  
**Source:** Evans 2nd(50)
- 33) Q: What is the whole zoological classification of the Modern Horse?**  
**A:** Kingdom - Animalia, Phylum - Chordata, Class - Mammalia, Order - Perissodactyla, Family - Equidae, Genus - Equus, Species - Equus Caballus  
**Source:** Griffiths(15)
- 34) Q:**  
**A:**  
**Source:** ()
- 35) Q:**  
**A:**  
**Source:** ()
- 36) Q:**  
**A:**  
**Source:** ()
- 37) Q:**  
**A:**  
**Source:** ()

**38) Q:**  
**A:**  
**Source: ()**

**39) Q:**  
**A:**  
**Source: ()**

**40) Q:**  
**A:**  
**Source: ()**

**41) Q:**  
**A:**  
**Source: ()**

**42) Q:**  
**A:**  
**Source: ()**

**43) Q:**  
**A:**  
**Source: ()**

**44) Q:**  
**A:**  
**Source: ()**

**45) Q:**  
**A:**

**Source:** ()

**46) Q:**

**A:**

**Source:** ()

**47)Q:**

**A:**

**Source:** ()

**48) Q:**

**A:**

**Source:** ()

**49) Q:**

**A:**

**Source:** ()

**50) Q:**

**A:**

**Source:** ()

**51) Q:**

**A:**

**Source:** ()

**52) Q:**

**A:**

**Source:** ()

53) Q:  
A:  
Source: ()

54) Q:  
A:  
Source: ()

55) Q:  
A:  
Source: ()

56) Q:  
A:  
Source: ()

57) Q:  
A:  
Source: ()

58) Q:  
A:  
Source: ()

59) Q:  
A:  
Source: ()

60) Q:  
A:  
Source: ()





**2017 NC State Horse Bowl Contest  
Mixed Division Extra Bonus Questions**

- 1) **Q: Name 5 gaits that are common to most horses.**  
**A:** Walk, trot or jog, canter or lope, gallop or run, back  
**Source:** Griffiths(69-70)
- 2) **Q: What 4 parts of a horse does the term "points" refer to when discussing colors?**  
**A:** Mane, tail, lower leg, ear rims  
**Source:** Griffiths(36)
- 3) **Q: There are many advantages to the use of Artificial Insemination in the mare. Name 3.**  
**A:** 1. Can breed from stallions in other geographical locations. 2. Potential to improve genetics in line. 3. No need to ship the mare to another location for breeding purposes. 4. Elimination of potential injury to stallion or mare during breeding. 5. Decreased risk of disease transmission associated with breeding.  
**Source:** AYHC 1st(950-1)
- 4) **Q: Give 3 advantages of composted manure over raw manure.**  
**A:** 1. Composting produces a relatively dry end product that is easily handled (less volume and weight). 2. Composting can kill fly eggs and larvae, pathogens and weed seeds. 3. Compost has less of an odor. 4. Composted manure acts a slow release fertilizer and soil conditioner  
**Source:** AYHC 1st(365-2)
- 5) **Q: Horses pick up parasites by ingesting grass, feed or water that is contaminated with parasite larva and eggs. What are the 4 most common internal parasites of horses that are contracted this way?**  
**A:** Ascarids, Strongyles, Pinworms, Bots  
**Source:** AYHC 1st(365-5)