

Equine Science Test
Biology, Anatomy, Conformation, Teeth and Measurement

1. The scientific name of the horse is equus caballus.
2. Phenotype is the physical or outward appearance of an animal.
3. The genetic make-up of an animal is known as it's genotype.
4. Name five systems of the horse and give a function of each.

Respiratory	Exchange of oxygen and carbon dioxide
Digestive	Take in food, break it down, collect beneficial nutrients, excrete waste products
Skeletal	Gives shape to the body and protects internal organs
Muscular	Produce bodily movement
Circulatory	Allows for the movement of blood throughout the body, transports oxygen and CO ₂ , removes waste products, regulates body temperature, etc.
Nervous	Cause various bodily acts, allow voluntary and involuntary responses
Endocrine	Produce and regulate hormones
Reproductive	Produce offspring
Dermatological	Protect internal structures, regulate body temperature
5. Ligaments connect bone to bone, while tendons connect muscle to bone.
6. Muscles are body tissue that expand and contract when stimulated to produce bodily movement.
7. Name the three types of muscle and tell where each might be found.

Smooth	Intestines, blood vessels, walls of the stomach
Cardiac	Heart
Skeletal	Throughout the body, attaching bones together
8. Respiration is the act of taking in oxygen and removing carbon dioxide. We call this breathing.
9. Horses can only breathe through their mouth.
10. What is circulation? Movement in a circle or circuit
11. What are three of the functions of blood? Transport nutrients, remove waste products, transport oxygen, transport endocrine secretions, equalize water content, regulate body temperature, regulate body acidity, deliver immune system antibodies, allergenic reactions

12. Arteries move blood away from the heart, while veins transport blood back to the heart.
13. The digestive system of the horse is approximately 100 feet long.
14. Digestion is the process that takes in food, breaks it down, collects beneficial nutrients, and excretes any Waste products.
15. A unique feature of the horse is that it cannot regurgitate.
16. Colostrum is the first milk that the mother gives and contains needed antibodies.
17. Foals should suckle within four hours after birth.
18. Conformation is the general body form and shape of the horse.
19. Regardless of the month in which the foal is born, its age is determined as of January 1.
20. Mares have 36 permanent teeth and males have 40.
21. The check ligament allows the horse to sleep standing up.
22. The suspensory ligament forms a sling around the pastern joint providing support and keeping it from collapsing to the ground.
23. Most of the horse's weight is carried on its front legs.
24. A horse's thrust and power come from his hindquarters.
25. A horse's front legs reach out to carry his weight and absorb shock.
26. Name one conformation fault found in the following areas of the horse's body.
 - A. Head or Neck: Roman nose, pig eye, small nostrils, ewe neck, bull neck, swan neck
 - B. Chest or Shoulder: Narrow chest, overly wide chest, straight shoulder, tied in at the elbow, etc.
 - C. Back, Topline, or Barrel: sway back, roach back, mutton withers, slab sided, narrow heart girth, etc.
 - D. Hind Quarters: Goose rump, flat croup, straight through the stifle, narrow through the hips, lacking substance, etc.
27. At Five years of age, a horse is said to have a full mouth.
28. A horse's front teeth are called incisors and are used to bite grass.

29. A horse's back teeth are called molars and are used to grind feed.

30. Horse's teeth grow throughout their life.

31. Wolf teeth are small vestigial teeth that can grow in front of the molars and should be removed, because they can interfere with the bit.

32. A hook appears on the corner upper incisor at ages 7 and 11.

33. Which indicate the teeth of a younger horse, cups or dental star? Cups

34. Galvayne's groove appears on the top of the corner incisor at about 10 years of age. It is about 1/2 way down by 15 and all the way down by 20.

35. A horse's teeth should be floated once a year to reduce sharp points due to uneven wear.

36. The term parrot mouth refers to the conformation where the upper teeth extend beyond the lower teeth.

37. Why is conformation so important?

It effects the comfort and efficiency of the horse's gait, his ability to stay sound and his overall health.

38. Label 15 parts of the horse on attached picture.

39. Label cranial, caudal, dorsal, ventral, dorsal leg, palmer leg, proximal, and distal on the parts picture.

40. Label the conformation defects of the horse on the attached picture.

41. Name the joints of the front and rear legs of the horse and the corresponding joints of the human arm/hand and leg/foot.

Shoulder	Shoulder	Hip	Hip
Elbow	Elbow	Stifle	Knee
Knee	Wrist	Hock	Ankle
Fetlock	First (proximal) finger joint	Fetlock	First (proximal) toe joint
Pastern	Second (middle) finger joint	Pastern	Second (middle) toe joint
Coffin	Third (distal) finger joint	Coffin	Third (distal) toe joint

42. How many bones are there in the horses body? 205
43. Horses are measured in hands.
44. A hand is four inches.
45. A horse should be measured at the highest point of the withers.
46. A horse that is 15.3 hands tall is how many inches tall? 63 inches
47. If a horse is 66 inches tall, how many hands is this horse? 16.2 hands
48. "Bone" is measured around the fore leg, just below the knee.
49. True or False. The measurement of bone actually includes the tendons as well.
50. For what reasons might you need the weight of your horse? Give two.
To administer a correct dosage of medicine
To calculate the correct amount of dewormer
51. What are two vital organs that a large heart girth gives room for?
Heart and lungs
52. Good bone in a horse is at least 8 to 9 inches.
53. Draw and label the parts of the hoof.
Frog, bars, heel, quarters, toe, wall, white line, sole, cleft of frog