

Horse Digestive System Student Notes – Answer Key

1. The digestive system components are basically sections of the long tube, sometimes called the alimentary canal.
2. The mouth is the first part of a horse's digestive system.
3. The alimentary canal is roughly 100 feet long in an average horse.
4. The alimentary canal is also known as the gastrointestinal tract.
5. The two main sections of the alimentary canal are: foregut and hindgut.
6. The foregut has two parts: stomach and small intestine.
7. The main functions of the stomach are:
 - break down food
 - begin protein digestion
 - regulate passage of food
8. The main functions of the small intestine are:
 - further digestion of protein, simple carbohydrates and fat
 - nutrient absorption
9. The stomach can vary in size from 8 to 16 quarts.
10. The stomach has 3 regions:
 - saccus caecus
 - fundic
 - pyloric
11. The saccus caecus region:
 - Acid first mixes with food.
 - It slows the fermentation process.
 - If the stomach fills with gas, a ruptured stomach lining can occur.
12. The fundic region:
 - The fermentation process slows even more.
 - Digestion and degradation of fats and proteins begins.
13. The pyloric region:
 - This is where the stomach joins the small intestine.
 - Fermentation has almost ended.
 - Protein digestion increases.

14. The pyloric sphincter controls the flow of food out of the stomach and into the small intestine.

15. The duodenum:

- This is part of the small intestine.
- Food is mixed with enzymes and bile.
- The small intestine is almost 70 feet long and has a capacity for about 15 gallons.

16. In addition to the duodenum, the jejunum and the ileum are also parts of the small intestine.

17. The esophagus:

- Is a muscular tube.
- Is 50 - 60 inches in length.
- It moves food from the mouth to the stomach using a wave-like movement called peristalsis.
- Movement only goes one way.

18. The hindgut:

- The hindgut or large intestine is made up of the cecum and colon.
- The cecum and colon ferment complex carbohydrates into useful end products.
- The colon absorbs nutrients and portion of water that accompanies food.

19. The cecum:

- Is about 4 feet long and 1 foot in diameter.
- It holds 8-10 gallons of food and water.
- It breaks down undigested food from the small intestine.
- It helps regulate body temperature.

20. The colon:

- The large colon is about 12 feet long and 10 inches in diameter.
- Microbial digestion continues here.
- Twisted gut usually occurs here.
- The small colon is about 10 feet long and 4 inches in diameter.
- The prime function of the small colon is to reclaim excess moisture and return it to the body.

21. The whole process of ingesting food, digesting it and expelling the waste can take from 36 to 72 hours on average.