The Digestive System: Motility

1. The process by which food is received into the GI tract via the mouth is called ____________________.

2. The esophagus is digestive in function.
   a. True
   b. False

3. Swallowing has both voluntary and involuntary components
   a. True
   b. False

4. The function of the epiglottis is to prevent a bolus from entering the _____.

5. The first wave of contraction of the esophageal muscles is called _______ _______.

6. If a food bolus does not make it all the way to the stomach, ________ peristalsis forces the bolus the remainder of the way.

7. Peristaltic contractions of the stomach occur about _____ times per minute when food makes it into the body & fundus.

8. The frequency of peristaltic contractions is regulated by ________ cells.

9. Gastric emptying would be slowed by which of the following:
   a. Fats in the duodenum
   b. Acids in the duodenum
   c. Hypertonic solutions in the duodenum
   d. Distention of the duodenum
   e. All of the above

10. _______ regulate gastric juice secretion during the cephalic phase.

11. *Now would be a great time to fill in the interactive table on page 7 of the Motility topic.

12. The cephalic phase of digestion is regulated by short reflexes
   a. True
   b. False.
13. The _______ nerve carries electrical signals from the brain to the stomach.

14. The hormone _____ regulates gastric secretion during the gastric phase of digestion.

15. Gastric motility _______ as the stomach begins to receive food.

16. The hormone ______ released by the duodenum cause gastric motility to decrease when fats are present in the duodenum.

17. The hormone ______ causes the gall bladder to contract and release bile into the small intestine.

18. The _______ reflex describes the communication between the intestine and the stomach.

19. Sympathetic nervous system stimulation ________ digestive system activity.

20. The motility process illustrated below is ________.

![Image of motility process]

21. Segmentation moves chyme in only one direction.
   a. True
   b. False

22. The frequency of segmentation contractions is greatest in the _____.

23. _____ reflexes stimulate the ileum to increase activity when food is in the stomach.

24. The hormone ________ causes the ileocecal sphincter to relax during the gastric phase.

25. During the inter-digestive period, _______ _______ _______ occur about once every 90 minutes to move undigested materials toward the terminal ileum.

26. Migrating motility complexes are controlled by the central nervous system
   a. True
   b. False
27. List the two major functions of the large intestine.
   a. _________________________
   b. _________________________

28. Pockets formed by the contractions of the transverse and descending colon musculature are called __________.

29. Sustained, intense propulsive peristaltic contractions of the large intestine are called __________ __________.

30. Which of the following is under voluntary control?
   a. Internal anal sphincter
   b. External anal sphincter

31. Only about _______ ml of the 500 ml of chyme that entered the colon is voided as feces.

32. Place the following labels on the large intestine figure below:

   *Cecum, ascending colon, transverse colon, descending colon, sigmoid colon, rectum, haustra, appendix*

33. The _______ reflex stimulates mass movements of the colon.
34. List three emotions that may produce constipation
   a. ______
   b. ______
   c. ______.

35. The vomiting reflex is coordinated in the _________.

36. Which of the following is not typically a stimulus for the vomiting reflex?
   a. Noxious chemicals
   b. Abnormal vestibular stimulation
   c. Sudden injury to the testes
   d. Sleep