1. The kidneys, duodenum and pancreas are considered to be:
   a. retroperitoneal
   b. extraperitoneal
   c. mesenteric
   d. hemipertoneal
   e. frimoticulative

2. Physical digestion includes:
   a. ingestion
   b. peristalsis
   c. lubrication
   d. break-up into smaller pieces
   e. all of the above

3. Physical digestion includes all of the following except:
   a. ingestion
   b. peristalsis
   c. hydrolysis
   d. breakdown into smaller pieces
   e. lubrication

4. Chemical digestion of food is essentially:
   a. hydrolysis
   b. completed in the stomach
   c. ingestion and peristalsis
   d. emulsification
   e. all of the above

5. Control of digestive functions is via what stimulus:
   a. chemical, from food content
   b. hormonal
   c. local, via nerve plexuses
   d. autonomic (visceral) nervous system
   e. all of the above are involved at various times

6. Gastrointestinal absorption is accomplished by:
   a. diffusion
   b. active transport
   c. facilitated diffusion
   d. all of the above
   e. "a" and "c" above, only

7. After absorption digested food is:
   a. carried by the blood circulation to all body cells
   b. first carried through the liver via the portal circulation
   c. sent through the lymphatic circulation for filtration and disinfection
   d. stored within sinusoids of the intestinal mucosa
   e. none of the above
8. Digestion is controlled by all of the following mechanisms, except:
   a. nervous
   b. pH
   c. mechanical
   d. excretory
   e. hormonal

9. Most of the digestive tract is lined with:
   a. stratified squamous epithelium
   b. simple squamous epithelium
   c. simple columnar epithelium
   d. simple cuboidal epithelium
   e. chief cells

10. What is the sequential order of the organs of the digestive tract from beginning to end:
    a. anal canal—colon--small intestine—stomach—esophagus—pharynx--mouth
    b. esophagus--colon--small intestine--mouth--anal canal--pharynx--stomach
    c. stomach—mouth—pharynx--esophagus--anal canal--small intestine--colon
    d. mouth--pharynx--esophagus--stomach--small intestine--colon--anal canal
    e. mouth—esophagus—pharynx—stomach—colon--small intestine--anal canal

11. The serous membrane which attaches the colon to the parietal peritoneum:
    a. mesocolon
    b. lesser omentum
    c. mesentery
    d. falciform ligament
    e. greater omentum

12. What is immediately below the epithelium of the mucosa:
    a. loose connective tissue
    b. circular muscularis externa
    c. adventitia
    d. serous
    e. muscularis mucosae

13. The physical act of eliminating food that does not get digested is termed:
    a. deglutition
    b. mixing
    c. hydrolysis
    d. ingestion
    e. egestion

14. All of the changes in and processing of ingested food which render it absorbable:
    a. peristalsis
    b. digestion
    c. respiration
    d. egestion
    e. emulsification
15. Which of the following is absent in the temporary ("baby") teeth:
   a. canines (cuspids)
   b. premolars (bicuspids)
   c. molars
   d. incisors
   e. none of the above

16. The full number of permanent teeth in an adult:
   a. 24
   b. 28
   c. 40
   d. 20
   e. 32

17. The posterior opening of the mouth, into the pharynx, is:
   a. uvula
   b. fauces
   c. haustra
   d. rugae
   e. chyme

18. Salivary glands are:
   a. labial
   b. buccal
   c. palatine
   d. lingual
   e. all of the above are examples

19. Saliva contains:
   a. amylase
   b. mucin (mucous)
   c. water
   d. buffers
   e. all of the above

20. Salivary pH is approximately:
   a. 2.5
   b. 0.9
   c. 7.0
   d. 5.0
   e. 10.5

21. Deglutition is accomplished by:
   a. the pyloric sphincter
   b. a pharyngeal swallowing reflex and esophageal peristalsis
   c. pancreatic peptides
   d. microvilli surface aminopeptidases
   e. gastrin
22. Papillae are:
   a. microscopic tonsils widespread through the mouth's mucosa
   b. microscopic salivary glands on the buccal and labial surfaces
   c. projections on the tongue which contain taste buds
   d. pouch-like segments of the colon
   e. mucosal projections into the small intestinal lumen for surface area increase

23. Skeletal muscle is within the following:
   a. ileo-cecal valve
   b. cardiac sphincter
   c. pyloric sphincter
   d. cervical esophageal region
   e. abdominal esophageal region

24. Saliva contains all of the following, except:
   a. amylase
   b. protease
   c. water
   d. buffers
   e. mucus

25. Where does mastication occur:
   a. colon
   b. stomach
   c. small intestine
   d. esophagus
   e. mouth

26. The function of bicarbonate ions in saliva:
   a. buffers the pH for optimum amylase activity
   b. permits the excretion of potassium ions
   c. hydrolysis of proteins
   d. hydrolysis of fats
   e. unknown

27. Odontoblasts are responsible for:
   a. secretion of bacteriostatic substances in saliva
   b. secretion and maintenance of dentin
   c. stimulation of tonsils to respond to ingested infectious agents
   d. peristalsis
   e. hydrochloric acid secretion in the stomach

28. A wave like, rhythmic, sequential motion along the GI tract, which propels a bolus or chyme along:
   a. peristalsis
   b. mastication
   c. emulsification
   d. hydrolysis
   e. egestion
29. Which of the following organs contains skeletal muscle within its wall:
   a. stomach
   b. small intestine
   c. esophagus
   d. colon
   e. gallbladder

30. Which of the following is not a salivary function:
   a. moisten food
   b. cleanse mouth
   c. begin starch hydrolysis
   d. emulsify fats
   e. lubrication

31. What is the location of buccal salivary glands and tonsils:
   a. tongue
   b. uvula
   c. hard palate
   d. cheeks
   e. gums

32. The tongue functions in:
   a. taste
   b. deglutition
   c. speech
   d. touch
   e. all of the above

33. Salivary glands are not located in which of the following locations:
   a. lingual
   b. buccal
   c. nasopharyngeal
   d. labial
   e. palatine

34. During swallowing, which of the following would occur first:
   a. contraction of superior pharyngeal constrictor
   b. contraction of middle pharyngeal constrictor
   c. tongue elevation
   d. contraction of inferior pharyngeal constrictor
   e. soft palate elevation

35. A rhythmic wave of sequential, alternate circular and longitudinal muscular contractions, to propel food through most of the GI tract:
   a. egestion
   b. peristalsis
   c. deglutition
   d. hydrolysis
   e. bolus
36. Which of the following has no control from a brain center:
   a. deglutition
   b. peristalsis
   c. salivation
   d. inspiration
   e. vasoconstriction

37. What is the glycoprotein, water and electrolyte combination which lubricates and moisturizes food:
   a. mucus
   b. serous secretion
   c. dentin
   d. emulsifier
   e. uvula

38. What is the location of labial salivary glands and tonsils:
   a. tongue
   b. gums
   c. lips
   d. cheeks
   e. palate

39. Cells which release and move secretions from salivary glands:
   a. myoepitheliocytes
   b. enteroendocrine
   c. serous
   d. mucous
   e. pseudostratified