(1) Mixing movements (a) promote digestion by mixing food with digestive juices. (b) facilitate absorption by exposing luminal contents to absorptive surfaces. (c) take place only in the stomach. (d) promotes digestion by mixing food with digestive juices and facilitates absorption by exposing luminal contents to absorptive surfaces. (e) All of these answers.
(2) Digestive motility (a) is accomplished by smooth muscle contractions. (b) is accomplished by smooth and voluntary muscle contractions. (c) may be propulsive in nature. (d) Both (a) and (b) above. (e) Both (a) and (c) above.
(3) Digestive secretions include (a) enzymes. (b) bile. (c) mucus. (d) hormones. (e) all of these answers.
(4) Carbohydrates are absorbed as (a) polysaccharides. (b) disaccharides. (c) monosaccharides. (d) amino acids. (e) fatty acids.
(5) Proetins are primarily digested to and absorbed as (a) amino acids. (b) cellulose. (c) fatty acids and glycerol. (d) monosaccharides. (e) vitamins.
(6) Digestion of polysaccharides (a) is accomplished using enzymes. (b) utilizes hydrolysis. (c) utilizes dehydration. (d) Both (a) and (b) above. (e) Both (a) and (c) above.
(7) The intrinsic nerve plexuses (a) produce spontaneous depolarization of the smooth muscle cells in the wall of the digestive tract. (b) are located in the mucosa. (c) coordinate local activity in the digestive tract. (d) Both (a) and (c) above. (e) All of these answers.
(8) The enteric nervous system (a) includes the myenteric plexes. (b) includes the submucosal plexes. (c) includes vagal nerve efferents. (d) Both (a) and (b) above. (e) Both (a) and (c) above.
(9) Which statement regarding control of digestive processes is incorrect? (a) short reflexes influence motility and secretion in localized areas. (b) all elements of the short reflexes are contained within the digestive organ's wall. (c) hormones play a role. (d) osmorectors monitor the acidity of the luminal contents. (e) there are stretch receptors in the walls of digestive organs.
(10) Salivary secretion is (a) entirely under neural control (i.e., there is no hormonal control of salivary secretion). (b) a passive secretion. (c) stimulated by the parasympathetic nervous system and inhibited by the sympathetic nervous system. (d) Two of these answers. (e) All of these answers.
(11) Which of the following is not a function of saliva? Saliva (a) facilitates swallowing. (b) serves as a solvent for molecules that stimulate taste buds. (c) dissolves glucose to facilitate its absorption by the oral mucosa. (d) has antibacterial action. (e) aids speech.
(12) During the oropharyngeal phase of swallowing, food is prevented from (a) reentering the mouth by elevation of the uvula, which lodges against the back of the throat. (b) entering the nasal passages by closure of the nasopharyngeal sphincter. (c) entering the trachea primarily by the epiglottis blocking the opening between the vocal cords. (d) More than one of these answers. (e) None of these answers.
(13) Secondary peristaltic waves in the esophagus (a) occur when a large or sticky bolus becomes stuck in the esophagus. (b) are coordinated by the swallowing center. (c) are coordinated by the intrinsic nerve plexus within the esophageal wall. (d) Both (a) and (b) above. (e) Both (a) and (c) above.
(14) The gastroesophageal sphincter is normally closed to prevent (a) air from entering the esophagus during. (b) gastric contents from refluxing into the esophagus. (c) vomiting. (d) esophageal leaking into the stomach. (e) food from entering the pharynx.
(15) Receptive relaxation refers to relaxation of the (a) pharyngoesophageal sphincter during swallowing. (b) pyloric sphincter when the duodenum is prepared to receive the chyme. (c) external anal sphincter when the individual is receptive to the defecation reflex. (d) stomach as it starts to fill, thereby allowing an increase in volume with very little increase in pressure. (e) None of these answers.
(16) The pyloric sphincter is located between the (a) esophagus and stomach. (b) oral cavity and esophagus. (c) large intestine and rectum. (d) small intestine and large intestine. (e) stomach and small intestine.
(17) Gastric mixing (a) occurs primarily in the body of the stomach. (b) occurs as a result of the stomach's contents being tumbled back and forth in the antrum because of vigorous peristaltic contractions. (c) mixes the food with gastric secretions to convert it to a finely divided liquid form known as chyme. (d) Both (b) and (c) above. (e) All of these answers.
(18) Which of the following factors is the most potent stimulus for inhibition of gastric motility? (a) fat in the duodenum. (b) acid in the duodenum. (c) acid in the stomach. (d) distention of the stomach. (e) hypertonicity of the duodenal contents.
(19) Bile acts on (a) distention of the stomach. (b) gastrin. (c) carbohydrate in the stomach. (d) fat in the duodenum. (e) fat in the stomach.
(20) Which statement regarding gastric motility and emptying is incorrect? (a) increased fluidity allows more rapid emptying. (b) presence of acid and fat in the stomach initiates the enterogastric reflex. (c) increased gastric volume stimulates motility. (d) vagal activity stimulates motility. (e) distention of the stomach initiates short reflexes.
(21) Hormones acting in the small intestine include (a) secretin and cholecystokinin. (b) secretin and gastrin. (c) cholecystokinin and gastrin. (d) All of these answers. (e) None of these answers.
(22) Which of the following is not secreted by the stomach in response to parasympathetic (acetylcholine) stimulation? (a) pepsinogen (b) HCl (c) gastrin (d) histamine (e) oth gastrin and histamine are not secreted in response to parasympathetic stimulation.
(23) The chief cells of the gastric mucosa secrete (a) bicarbonate ions. (b) HCl. (c) pepsinogen. (d) sucrase. (e) trypsin.
(24) The parietal cells of the gastric mucosa secrete (a) HCl. (b) pepsinogen. (c) intrinsic factor. (d) Both HCl and pepsinogen. (e) Both HCl

and intrinsic factor.
(25) Which of the following statements concerning HCl secretion by the stomach is correct? (a) HCl inactivates salivary amylase and the pancreatic enzymes. (b) HCl activates pepsinogen. (c) it establishes a low pH in the stomach. (d) Both (a) and (b) above. (e) All of these answers.
(26) Which factor below does not slow down gastric activities? (a) enterogastric reflex. (b) entergastrones. (c) secretin. (d) gastrin. (e) cholecystokinin.
(27) Intrinsic factor is (a) secreted by the parietal cells in the stomach. (b) necessary for absorption of vitamin B12. (c) abundant in pernicious anemia. (d) Two of these answers. (e) All of these answers.
(28) Pernicious anemia can occur when (a) the stomach has been removed. (b) the terminal ileum has been removed. (c) there is a deficiency of intrinsic factor. (d) Both the stomach has been removed and there is a deficiency of intrinsic factor. (e) All of these answers.
(29) After pepsinogen is activated, it (a) autocatalytically activates more pepsinogen. (b) activates the pancreatic proteolytic enzymes in the duodenal lumen after gastric emptying has occurred. (c) inhibits the pyloric gland area in a negative-feedback fashion. (d) Both (a) and (b) above. (e) All of these answers.
(30) As food leaves the stomach, gastric secretion is reduced. Which of the following factors does not contribute to this reduction? (a) fat in the duodenum (b) low gastric pH (c) distention of the duodenum (d) high concentration of acid in the stomach or duodenum (e) pepsinogen in the duodenum
(31) Which of the following does not occur during vomiting? (a) the diaphragm contracts. (b) the abdominal muscles contract. (c) the stomach contracts. (d) respiration is inhibited. (e) the glottis is closed.
(32) During vomiting, the (a) diaphragm contracts. (b) abdominal muscles contract. (c) stomach contracts. (d) Both the diaphragm and the abdominal muscles contract. (e) All of these answers.
(33) Peptic ulcers (a) are usually caused by excessive neural stimulation. (b) are usually caused by bacterial infection. (c) compromise the mucosal barrier and stomach wall. (d) Both (a) and (b) above (e) Both (b) and (c) above.
(34) Cholecystokinin (a) is secreted by the endocrine portion of the pancreas. (b) stimulates pancreatic enzyme secretion. (c) causes contraction of the gallbladder. (d) Both (b) and (c) above. (e) All of these answers.
(35) Which of the following accurately describes chymotrypsinogen? (a) chymotrypsinogen is activated by enterokinase. (b) once activated, chymotrypsinogen is involved in protein digestion. (c) chymotrypsinogen is secreted by the endocrine pancreas. (d) All of these answers. (e) None of these answers.
(36) Which statement regarding control of pancreatic secretion is correct? (a) gastrin stimulates release of neutralization solution. (b) CCK stimulates release of enzymes. (c) secretin stimulates release of bicarbonate. (d) Both (a) and (b) above (e) Both (b) and (c) above.
(37) Which of the following statements about pancreatic enzymes is incorrect? (a) trypsinogen is secreted in an inactive form. (b) pancreatic amylase digests carbohydrate. (c) pancreatic lipase is responsible for triglyceride digestion. (d) except for trypsinogen, other proteolytic enzymes are secreted in active form. (e) trypsinogen is activated by enterokinase.
(38) Which of the following statements concerning secretin is correct? (a) the most potent stimulus for secretin secretion is the presence of fat in the duodenum. (b) secretin stimulates pancreatic enzyme secretion. (c) secretin stimulates the secretion of sodium bicarbonate. (d) secretin stimulates the pancreatic acinar cells. (e) None of these answers.

(39) Bile salts (a) aid fat digestion through their detergent action. (b) aid fat absorption through micelle formation. (c) are lost in the feces once secreted into the bile. (d) Both (a) and (b) above. (e) All of these answers.
(40) Which of the following stimulates gallbladder contraction? (a) CCK. (b) secretin. (c) sympathetic stimulation. (d) Both (a) and (c) above. (e) Both (b) and (c) above.
(41) The small intestinal digestive enzymes (a) are secreted into the lumen, where they perform their function. (b) act intracellularly within the brush borders. (c) complete the digestion of carbohydrates. (d) Both (a) and (c) above. (e) Both (b) and (c) above.
(42) The primary factor responsible for moving the chyme forward in the small intestine is (a) mass movements. (b) migrating motility complex. (c) a gradient in the frequency of segmentation along the length of the small intestine. (d) sequential ringlike contractions that move progressively forward along the length of the small intestine in a stripping motion, pushing the chyme ahead of the contraction. (e) stimulation of the intestinal smooth muscle by enterokinase.
(43) Which of the following enzymes is not secreted into the duodenal lumen? (a) aminopeptidase. (b) lipase. (c) trypsinogen. (d) procarboxypeptidase. (e) amylase.
(44) Which absorptive processes occurs? (a) carbohydrate is absorbed by active transport in the small intestine and enters the blood. (b) fat is absorbed by active transport in the small intestine and enters the lymph. (c) protein is absorbed primarily by pinocytosis. (d) the water-soluble vitamins are carried in the micelles, which are water-soluble. (e) chylomicrons dissolve in the lipid portion of the plasma membrane to

enable fat to enter the intestinal cell from the lumen.
(45) Which of the following is absorbed receptor mediated endocytosis in the terminal ileum? (a) fatty acids and monoglycerides. (b) bile. (c) vitamin B12 (d) amino acids. (e) All of these answers.
(46) Absorption of which of the following is linked to active sodium absorption at the basolateral border of the epithelial cell (a) water. (b) glucose. (c) galactose. (d) amino acids. (e) All of these answers.
(47) Which of the following does not directly enter the blood upon being absorbed from the digestive tract? (a) glucose. (b) monoglycerides and free fatty acids. (c) amino acids. (d) alcohol. (e) vitamin B12.
(48) The ezyme that breaks down table sugar is (a) maltase. (b) lactase. (c) sucrase. (d) enterokinase. (e) peptidase.
(49) Which is not a brush border enzyme? (a) enterokinase. (b) aminopeptidase. (c) lipase. (d) lactase. (e) maltase.
(50) Lactose intolerance is (a) caused by lack of a specific disaccharidase. (b) caused by lack of lactose. (c) results in bacterial metabolism of lactose. (d) Both (a) and (b) above. (e) Both (a) and (c) above.