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Digestive system physiology mcq pdf

This is the important function of bile [NCERT-75.77, BHU-78.79, CPMT-82] The stomach is J-shaped portion of the food channel located in the epigastric, umbilical and hypochondrial left regions of the abdominal cavity. The stomach has a heart spinner where it joins the esophagus and a pyloric sphincter where it meets the duodenum. It has two curves, the lower curvature on the back surface and the greater curvature on the front surface. The stomach is divided into three regions, the bottom, the body and the pilus. At the end of the pilorus is the pyloric sphincter. When the stomach is inactive, the sphincter is relaxed and open and when the stomach contains food, the sphincter is closed. All organs of the food channel have a similar structure with small modifications according to their functions. The stomach wall also has 4 layers-ventriculus, muscle, submucosa and mucosa.

Muscle layer:- the muscle layer of the stomach wall has 3 layers instead of two in other organs which are 1. The outer layers with longitudinal fibers 2. medium layer with circular fibers 3. internal layer with oblique fibers. This type of arrangement is made in order to provide the flow motion for gastric activity and also supports the peristaltic movement. Circular muscle is stronger between the pylon and the pyloric sphincter. Mucosa:- when the stomach is empty, the mucosa turns into the folds and the stomach is full, the folds are converted into smooth appearance. No. of gastric glands located at its open. They are turned up made of specialized cells that secrete gastric juice. Functions of the stomach

The functions of the stomach are the following - provides temporary storage that allows digestive enzymes to perform their chemical digestion functions of protein-pepsin breaks proteins in polypeptides into peptides; secretes mucus to lubricate the passage for gastric content to the duodenum; secreted gastric juice size of normal gastric juice varies with the amount of food present in the stomach, when a meal was eaten, food is present in the stomach in layers and the last part of the meal remains in the bottom for a long time. Mixing with gastric juice is gradually done. Parasympathetic stimulation increases stomach motility and gastric juice secretion Approximately 2 liters of gastric juice is secreted daily by gastric glands that are present in the mucosa. consist of mineral salts of water mucous acid hydrochloric factor intrinsic inactive enzymes such as pepsinogen. Functions of gastric water of juice present further liquifies the swallowed food HCl- acid the food and then stops the action of salivary amylase; kills microbes; provides the acid environment for the action of pepsin pepsinogens are activated to pepsine. Intrinsic factor is necessary for the absorption of vitamin B₁₂ from the ileo mucosa prevents mechanical injury to the stomach wall. There is always a small amount of gastric juice present in the stomach even when the stomach is empty, this is known as fasting juice. The secretion of gastric juice is maximum after 1 hour of the meal. The level of declining juice at the level of fasting juice after 4 hours. There are 3 phases of secretion of gastric juice-

Cephalic Phase:- This phase occurs before the food reaches the stomach. It is due to the stimulation of the reflex of vague nerves that provides parasympathetic stimulation that begins due to the smell or taste of food. Sympathetic stimulation inhibits the secretion Gastric Phase:- enteroendocrine cells in the pylon and the duodenum secretes the hormonal gastrin that are stimulated due to the presence of food in the stomach. La la la la la la lapasses into the blood; throughgastrin reaches the stomach that stimulates the gastrine glands to produce more gastric juice. in this way the secretion of digestive juice is completed after the meal. The gastric secretion stops when the Ph in the pylon becomes 1.5. Intestinal phase:- when the partially digested content flows into the duodenum, two hormones-in and chotoktin (CCK) are produced by small intestine that slows the secretion of gastric juice. It chyme in the duodenum becomes more accurately mixed with pancreatic juice and bile when the rate of emptying of the stomach falls, the rate at which the stomach voids depends on the type of food present; as the carbohydrates remain for 2-3 hours, proteins take longer, but fats require much time. Small intestine At the proximal end of the small intestine, it joins with the stomach to the pyloric sphincter. is about 2.5 cm in diameter and is about 5 m long and at the distal end the small intestine meets the caecum of large intestine to the ileoceaca valve. is located in the abdominal cavity. is divided into 3 parts Duodenum--is about 25 cm long and is present around the pancreas. pancreatic juice and bile merges into the hepatopancreatic ampulla and the mixture enters the duodenum through the duodenal papilla Jejunum- is the central part that is about 2 m long intestine. is about 3m long and ends with the ileocaeca valve where it joins the caecum of large intestine and this valve also presents the back flow of the small The small intestine wall is made of 4 layers- peritoneum- double layer of peritoneum covers the entire length of the small intestine and forms the mesentery to fix the organ to the posterior abdominal wall. Muscularis- consists of inner circular muscles and outer longitudinal muscles. Serosa- formed by permanent circular folds, villi and microvilli. Small intestine carries out various functions which are described as follows- movement of contents from small intestines forward by peristalsis. secretion of chemical digestion of intestinal juice of carbohydrate, fats, protein protection from secretion of microbes of hormones such as cholectostichina (CCK) and the absorption of secretion of nutrients The chemical digestion in small intestine occurs when the acid chime passes into the small intestine, is mixed with pancreatic juice, bile and intestinal juice. nutrient digestion is completed when- Carbohydrates break in monosaccharides Protein breaks into amino acids Fats are broken into fatty acids and glycerol)

pancreatic juice is secreted by exocrine pancreas. is fundamental in nature, its compound of water, mineral salts, amylase, lipases, proserinsogen and chimotropysinogen. bile is secreted by the liver and is stored in the bladder of the gallbladder and the pH is 8. It consists of water, mineral salts, muscus, bile salts, biliary pigments and cholesterol. The functions of the bile include the emulsification of fats, makes cholesterol and soluble fatty acid and excretion of bilirubin the intestinal juice is secreted by the small intestine. It is also fundamental in nature and consists of water, muscus and mineral salts. The absorption of nutrients from small intestines occurs during different processes such as diffusion, osmosis, facilitated diffusion, active transport etc. the surface through which the absorption of nutrients occurs in small intestines has increased from circular folds and villi. We will study complete digestion and nutrient absorption in the next articles. Large intestine is about 1.5m long which begins at caecum and ends at the anal channel that is inside the basin, the large intestine has diameter of 6.5 cm and is moored the small intestine. The large intestine is divided into four reasonsthes lower end is closed as it joins the ascending colon above. is about 8-9 cm long and contains the large number of lymphoid tissue. Appendix has no digestive function but when it is inflamed, it can cause problems. Colon- colon has 4 parts that have the same structure and function-ascending colon transverse colon descendant colon sigmoido canal Rectum:- it is about 13 cm long and leaves from the sigmoido canal and ends at the anal channel. Anal Canal:- is about 3.8 cm long which leads to the outside of large intestine. has two sphincter -- the inner sphincter which is controlled by ANS and the outer sphincter that is under voluntary control. The large intestine wall has four layers as in other organs of food tract with some modifications that are described as follows-- in caecum and colon, the longitudinal muscles are present in form collected in 3 bands instead of a continuous layer. in rectum, longitudinal muscles form the basic structure and therefore completely surround the feces. The muscularis layer is composed of two layers while in the upper half of the large intestine there is one layer. Microbial activity- microbial activity along with the absorption of minerals salts and vitamins Some drugs- microbial activity in large intestine consists of larger number of bacteria that synthesize vitamin K and the mass motor organic acids since peristalsis does not occur in large intestines but once after every 30mins, a wave of peristalsis facilitates the contact of flowing into place in the intestine along with the absorption of minerals salts and vitamins Defaecation:- is the final phase of digestion where waste material is excreted through anus, defaecation involves involuntary contraction of the rectum muscle and relaxation of the sphencterinis. inside of abdominal muscles and lowering the diaphragm adds increasa intra-addominal pressure which also facilitates defeat. feces are the undigested waste material in the small intestine. consists of semi-solid brown mass, the brown color is due to the presence of stercobilin, the water is absorbed in large and small intestine, still found in the stools. it consists of fiber-indigestible cellular plant and dead animal material and live microbes fatty acids epithelial cells that stem from the mucosa of the gi secreted by the large intestines more chosen questions-(mcqs) on the basis of stomach & gastric juice section 1. Where's the stomach? a. epigastric region of abdominal cavity b. right hypochondriac region of the abdominal cavity c. in front of the pelvic cavity d. behind the pelvic cavity 2. which wall layer of the stomach contains the gastric glands? a. advertitia b. muscle layer c. mucosa d. sub-mucosa 3. What is the function of the stomach? a. temporary storage b. chemical digestion of proteins c. defense against microbes d. all 4 preceding, which of the following is not the constituent of gastric juice? a. water b. mineral salts c. mucosa d. none of the previous 5. Which of the following statement is not true? a. the stomach is divided into 3 regions b. the proximal end of the pylorus has the pyloric sphincter c. secrets of gastric juice intrinsic factor d. hcl is secreted by pariatic cells 6. What phase of digestion begins before food enters the stomach? a. cephalic phase b. gastric phase c. intestinal phase d. sia e f g h 7. match the following- a) external layer of muscle layer 1. contains circular fibers b) average layer of muscle layer 2. contains longitudinal fibers c) internal layer of the muscle layer 3. contains gastric glands d)mucosa 4. contains obliquesh. which of the following is not the function of gastric juice? a. acidity food b. liquefies food c. iron preparation for digestion d. kills microbes 9. What does the cephalic phase of digestion begin? a. sympathetic stimulation b. parasympathetic stimulation c. sense of both small d. both b and c 10. which nutrients remain in the stomach for the longest time? a. lipids b. protein c. fat carbohydrates ANSWERS:- 1. epiastric region of abdominal cavity 2. mucosa 3. all 4. none of five precedents. the proximal end of the pyloric has the pyloric sphincter 6. cephalic phase 7. a) - 2 b) - 1 c) - 4 d) - 3 b Preparation of iron for absorption 9. both b and c 10. fat multiple choice questions (mcqs) based on small intestine and large intestine 1. where the small intestine joins the stomach? a. luntus b. less curvature c. greater curvature d. mid-point 2. what is the main function of the small intestine? a. mixing of food particles with digestive juices b. absorption of nutrients c. breaking down of complex molecules into simpler ones d. formation of heptapica duct c. duodenale impression d. hepatoapancreatic ampulla 5. match the following- a) fruit juice 1. secret from small intestine b) saliva 2. secret from pancreas c) intestinal juice 3. excluded even if anus d)Piedi 4. secret from liver 6. What is the length of the large intestine? a. 3 meters b. 1.5 meters c. 5 meters d. 2 meters 7. which of the following statements is not true? a. the illeocaeval valve prevents the back flow of content b. pancreatic juice is acid in nature c. defecation involves contraction of the muscles of the rectum d. in the mass movement, peristalsis occurs after every 30 minutes 8. What is the reason for the brown color of the feces? a. presence of fiber b. sheds epithelial cells c. stercobilin d.b what 9. what is the function of small intestine? a. mass mass,b defecation C. microbial activity D. none of the previous 10. Which of the following is not the content of mineral salts bile A. pigment bile c. amylyse D. water ANSWER:- 1. porlic vents 2. 5 meters 3. all 4. hepatoapancreatic ampulla 5. a) - 2 b) - 4 c) - 1 d) - 3.6 5. 15 meters 7. pancreatic juice is acid in nature 8. stercobilin 9. None of the 10. amylose For More Standard and Quality Question Bank you can participate in our GPAT series test program, NIPER JEE, Pharmacist Recruitment Exam, Drug Inspector Recruitment Exam, PhD Entrance Exam for Pharmacy Participates in Online Free GPAT TEST: CLICK HERE Join Online Pharmacist TEST: CLICK HERE TEST: CLICR RIFW Wilson 12th edition; page no.: 297-301. 297-301. digestive system physiology mcq pdf. digestive system anatomy and physiology mcqs

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