

1. Starting with the mouth, describe the path food takes through organs of the digestive system as it is converted into chyme and then feces. Also include what is happening in each organ.
My answer: Mouth: food is chewed and swallowed. Saliva contains an enzyme that breaks down starch into glucose | Esophagus: food passes down the esophagus to the stomach | Stomach: the muscle walls of the stomach produce gastric juices that contain the protease enzyme. This breaks down protein into amino acids. the food is turned into small chunks of chyme which goes into the small intestine slowly, bit by bit. | Small intestine: produces amylase, protease, and lipase enzymes to break down additional protein, carbohydrate, and fats. Digestion is then complete and food is absorbed into the bloodstream | Large intestine: indigestible food goes to the large intestine. Water and calcium is absorbed and the remaining food becomes feces | Rectum: feces are stored in the rectum and leave the body
2. From your notes, identify the four labeled parts of a tooth (A, B, C, and D) and indicate the role of each part.
My answer: A. Enamel: the hard mineralized and exposed surface of the tooth. 95% mineral (hydroxyapatite: crystallized calcium and phosphate) | B. Dentin: the bulk of a tooth, includes minerals, soft tissue, and water. 45% hydroxyapatite with cells and water | C. Cementum: the outer lining of the tooth within the gums. Area that covers the root. Made of cementoblasts (builds cementum) and cementocytes | D. Pulp: contains blood vessels that feed cells and nerves for sensation. Pulp within the root of a tooth is often referred to as the root canal. connective tissue
3. Explain what villi are in the small intestine, including: (A) how they are structured, (B) what they do, and (C) why they are important.
My answer: A. Villi are on folds that contain villus (plural of villi) and each villi has microvilli. Villi are small projections that kind of look like fingers They are structured this way to increase surface area. More surface area means more absorption. | B. The purpose of villi is to absorb as many nutrients as possible. They absorb nutrients into the blood which then transfers them to other organs. | C. They are important because they absorb majority of the nutrients from the food that we consume and spreads those nutrients to other organs.
4. Select a digestive misconception and describe: (A) what the misconception is, (B) why it is incorrect, and (C) how you think the misconception may have formed.
My answer: False: most types of bacteria are bad for the GIT. | True: beneficial species outcompete other species and assist with vitamins. | This is false because we actually have had bacteria in our GIT for generations. This misconception is probably formed from people trying to change their microbiome by trying to take pills