Digestion Questions

Bio 178 Worksheet
August 2026

1. Which of the following structures/organs is least involved in the mechanical/chemical breakdown of food, and absorption of nutrients?

A) The small intestine

B) Esophagus

C) Tongue

D) Gallbladder

2. Bile salts bind at their hydrophobic regions to large fat globules within the chyme that enters the duodenum. Bile salts break up the fat globule into smaller fat droplets. This role of bile salts is best described as _____.

A) lipid emulsification

B) lipid absorption

C) lipid digestion

D) lipid metabolism

3. Some antacid drugs block histamine receptors, resulting in reduction of the production and excretion of stomach acid (HCl). What cells secrete HCl?

A) Goblet cells

B) Chief cells

C) Mucous neck cells

D) Parietal cells

4. A clinician consulting a patient that recently has had their gall bladder removed would likely advise the following:

A) Eating foods that are low in fat

B) Fewer, but larger meals

C) A low to no carb diet

D) Increasing unsaturated fats while eliminating trans fats in their diets

5. Why is a ruptured appendix a life threatening condition?

A) The large intestine will no longer be able to receive digested material from the small intestine

B) It is likely to cause massive infection of the abdominopelvic cavity

C) A small portion of the digestive system's immune function will be lost and therefore make the patient more susceptible to infection.

D) It is likely to cause severe internal bleeding

6. The hormones secretin and cholecystokinin are released by the following cells:

A) Gastric parietal cells

B) Hepatocytes

C) Duodenal enteroendocrine cells

D) Acinar pancreatic cells

7. Which vitamin requires intrinsic factor to be absorbed?

A) A

B) D

C) K

D) B12

8. The breakdown of starches first occurs in what part of the GI system?

A) Mouth

B) Esophagus

C) Stomach

D) Large intestine

9. The principal action of Chief cells is to produce what?

A) Mucin

B) HCL

C) Pepsinogen

D) Cheifsine

10. Digestion and absorption of which of the following would be affected the most if the liver were severely damaged?

A) Lipids

B) Proteins

C) Starches

D) Nucleic acids

11. Which of the following produces intrinsic factor?

A) Parietal cells

B) Chief cells

C) Mucous neck cells

D) Enteroendocrine cells

12. Which of the following is *not* structural or functional characteristic of the large intestine?

A) Does not contain villi and microvilli to increase surface area for absorption

B) water and electrolyte reabsorption takes place here

C) Is a location where vitamin B and C are synthesized in small amounts by normal bacterial flora

D) Has pocket-like sacs called haustra

13. The principal enzyme for breaking down carbohydrates is what?

A) Amylase

B) Bile

C) Intrinsic factor

D) Trypsin

14. The acinar cells chief function is to secrete what?

A) Pancreatic juice

B) Gastric acid

C) Histamine

15. The following pathology not only affects the small intestine and large intestine, but it can also affect the mouth, esophagus, stomach, and anus. It is associated with continuous lesions throughout these structures:

A) Ulcerative colitis

B) Crohn's disease

C) Irritable bowel syndrome

D) Colon cancer

16. Chronic inflammation and scarring due to chronic alcohol use is associated with what organ?

A) Mouth

B) Rectum

C) Pancreas

D) Esophagus

17. If someone is about to give a presentation to a large crowd but is very nervous, why would their mouth suddenly go dry, and they would feel as though they had "cotton mouth?"

A) Sympathetic activity inhibits salivation.

B) Parasympathetic activity inhibits salivation.

C) Parasympathetic activity stimulates salivation.

D) Enteric activity inhibits salivation.

18. The superior mesenteric artery supplies the following structure_____

A) Jejunum

B) Descending colon

C) Rectum

D) Anus

19. The following is not a structure of the stomach

A) Body

B) Fundus

C) Sinusoid

D) Pylorus

20. Where are the Stellate macrophages (Kupffer cells) located?

A) Hepatic Sinusoids

B) Bile duct

C) Portal vein

D) Hepatic artery

Answer Key

1. Esophagus

2. Lipid emulsification

3. Parietal cells

4. Eating foods that are low in fat

5. It is likely to cause massive infection of the abdominopelvic cavity

6. Duodenal enteroendocrine cells

7. B12

8. Mouth

9. Pepsinogen

10. Lipids

11. Parietal cells

12. Is a location where vitamin B and C are synthesized in small amounts by normal bacterial flora

13. Amylase

14. Pancreatic juice

15. Ulcerative colitis

16. Pancreas

17. Parasympathetic activity stimulates salivation

18. Jejunum

19. Sinusoid

20. Hepatic sinusoids