

The Digestive System & Metabolism
Study Guide C25 & C26
Hot List Questions (W2020)

1. What are the functions of the digestion system? Significance of each function?
2. What is the order of the segments in the gastrointestinal tract?
3. What is the function for each segment of the GI tract?
4. What type of muscle regulates passage along the GI tract?
5. What are the accessory organs of the digestive system? Functions of each?
6. What are the four classes of macromolecules? What are their monomers called?
7. What role does the pancreas provide in digestion? (2) Explain both.
8. What is a zymogen?
9. What is the structure of a gastric pit?
10. What are the four different type of cells in a gastric pit? Each cell's secretions and their functions?
11. What is the difference between chemical and mechanical digestion? Significance? Location?
12. What is the enterogastric reflex?
13. How long does it take to empty the stomach after a meal?
14. What macromolecule is a polymer of glucose? Where is this polymer stored? Location of single largest deposit of this polymer?
15. When running, how long does it take to deplete glycogen?
16. What are the three components of bile? Function of each component?
17. What is an enteroendocrine cell? Locations?
18. What is secretin? Produced by? Function? Target tissue(s)?
19. What is cholecystokinin? Produced by? Target tissue(s)?
20. What is glucose-dependent insulinotropic peptide? Produced by? Target tissue?
21. What is ghrelin? Nickname? Target tissue?
22. What is contact digestion? Where does this occur? Type of molecule? Function?
23. What is segmentation? Location? Function? Occurs when?
24. What is peristalsis? Also called? Location? Function? Occurs when?
25. What is the structure and function of a micelle? Where are they formed?
26. What is the structure and function of chylomicrons, HDL, VLDL, and LDL?
27. How is the surface area of the small intestine increased? Significance?
28. What is the volume of the stomach when empty? After normal meal? After holiday meal?
29. How long does it take to empty the stomach after a normal meal?
30. What terms are used to describe the food as it passes through the alimentary canal (3 terms)?
31. How much food passes into the duodenum with each stomach contraction?
32. Where is 99% of the nutrients digested and absorbed?
33. Where does carbohydrate digestion start? Where does most of the carbohydrate digestion occur? Type of enzyme for carbohydrate digestion?
34. Does carbohydrate digestion occur in the stomach? Why?
35. Where does protein digestion begin? Enzyme for this digestion?
36. Where does lipid digestion start? Where does most lipid digestion occur?
37. What is needed to digest lipids? Sources for these substances?
38. What is the significance of the hepatic portal vein?
39. What nutrient will not travel through the hepatic portal vein? Why?
40. What are the three phases of gastric regulation? Explain
41. What three factors protects the stomach's mucosa from "digestion"?

42. What is the enterohepatic circulation? Used for what?
43. What is the alkaline tide?
44. What is the only essential function of stomach?
45. What is the significance of glycolysis and the Krebs's Cycle? Where do they occur? Net result of each pathway? Include products and waste?
46. What are enterokinase? What is the function of enterokinase?
47. What is the significance of the enteric nervous system? What does it regulate? How is it modified?
48. What is the function of Vitamin D? How is it formed? Nickname?