Digestive Enzymes

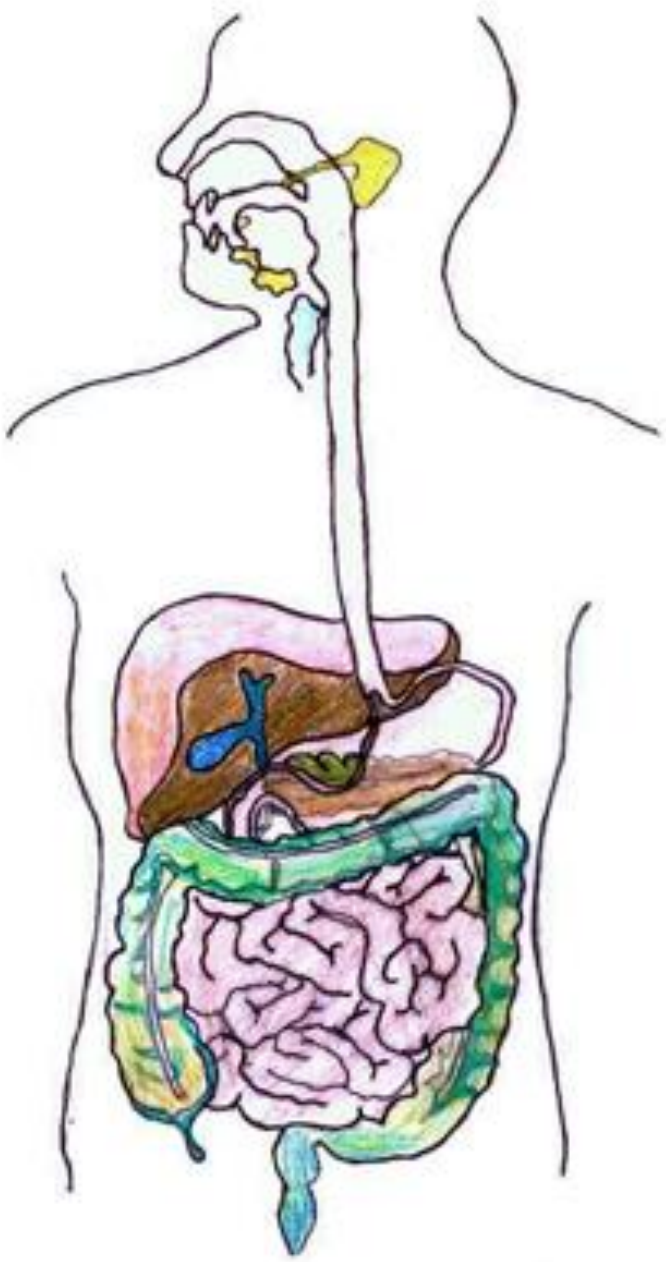
Legend:
- not in the textbook
- nutrients that will be absorbed by the small

Name: _____
Block: ____

	Enzyme	Glandular source Where does it come from?	Location Where is it active?	Optimal pH	Reaction Show the substrate it catalyzes and the resulting products.
Carbohydrates	Salivary amylase	Salivary gland	Mouth	6.8	Starch + water → maltose
	Pancreatic amylase	Pancreas	Small intestine (duodenum)	8	Starch + water → maltose
	Maltase	Small intestine (walls)	Small intestine	8	Maltose + water → glucose + glucose
Proteins	Proteases	Include which enzymes? Pepsinogen, pepsin, trypsinogen, trypsin			
	Pepsinogen	Gastric glands	Precursor for what? pepsin		
	Pepsin	From pepsinogen in the gastric gland	stomach	2	Protein + water → peptides
	Trypsinogen	Pancreas	Precursor for what? trypsin		
	Trypsin	From trypsinogen in the pancreas	Small intestine (duodenum)	8	Protein + water → peptides
	Peptidase	Small intestine (walls)	Small intestine	8	Peptide + water → amino acids
Nucleic acids	Nuclease	pancreas	Small intestine (duodenum)	8	RNA and DNA + water → nucleotides
Fats	Lipase	Pancreas	Small intestine (duodenum)	8	Fat droplets + water → glycerol + fatty acids
	Bile (not an enzyme)	Liver	Small intestine (duodenum)	8	Fat → fat droplets

In the following diagram:

- label the pH of each digestive organ
- Indicate which organ each enzyme is created in and then active in.



Human Digestive System Diagram

Sketch by - Abhishake Sharma