

G11 Biology: Class 11 Homework

1. The trachea and the esophagus are located side by side. What mechanisms prevent food from entering the trachea when swallowing? **[2 marks]**

2. Strong acids can dissolve or chemically burn living matter. Why is the stomach tissue not damaged by stomach acid? Describe the mechanism by which the stomach lining is protected from the acidic gastric juice. **[2 marks]**

3. Pepsinogen is sometimes referred to as a pre-enzyme because it is the inactive form of the enzyme pepsin. Why is it necessary to have a pre-enzyme? **[3 marks]**

4. Name the sections of the small intestine. Briefly describe the digestive processes that occur in each section. **[6 marks]**

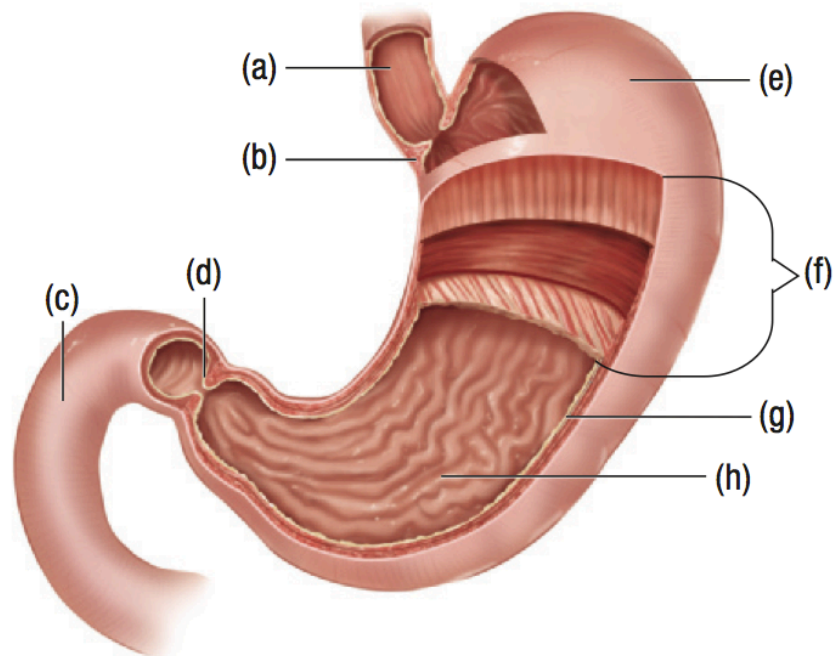
5. How is the small intestine adapted to maximize absorption of nutrients? **[3 marks]**

6. Gallstones often develop in the gall bladder when minerals in the bile form into small pebble-like structures. This often requires the removal of the gall bladder.
- a) What is the function of the gall bladder? **[1 mark]**

 - b) What might be the consequences of having your gall bladder removed? **[2 marks]**

 - c) What is a possible procedure to remove the gall bladder? **[1 mark]**
7. Describe the enzymes involved in the breakdown of proteins into individual amino acids in the digestive system. **[4 marks]**
8. Compare and contrast facilitated diffusion and active transport. **[3 marks]**
9. What are some risks of vomiting and diarrhea? **[2 marks]**

10. Label the following diagram of the stomach. **[8 marks]**



Label	Structure
A	
B	
C	
D	
E	
F	
G	
H	

11. What is an ulcer and what causes most ulcers? **[3 marks]**

12. Describe the digestion of a meal of chicken with olive oil, broccoli and rice as it moves through the digestive system, from the mouth to the large intestine. Describe the enzymes and the hormones used. **[8 marks]**

13. Compare and contrast osmosis and diffusion. **[3 marks]**

14. Our bodies cannot digest cellulose and most other fibres, yet fibre is a very important part of our diet. Explain what roles fibre plays in the digestive system and why we need it in our diet. **[3 marks]**

15. Predict what would happen to the human body if sections of the large intestine were removed. **[3 marks]**