

**AQA**

**A Level**

# **A Level Biology**

## **Digestion Questions**

Name:

**M M E**

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**Total Marks: /38**

## Digestion

Digestion is the process by which large molecules that we consume are broken down into molecules small enough that they can pass into the bloodstream and be transported into the body cells.

1. Most foods that organisms consume are complex polymers made up of monomer chains.

a) i) What are carbohydrate polymers called? (1 marks)

ii) What monomers make up proteins? (1 mark)

b) Hydrolysis is an essential process in digestions.

i) What is a hydrolysis reaction? (2 marks)

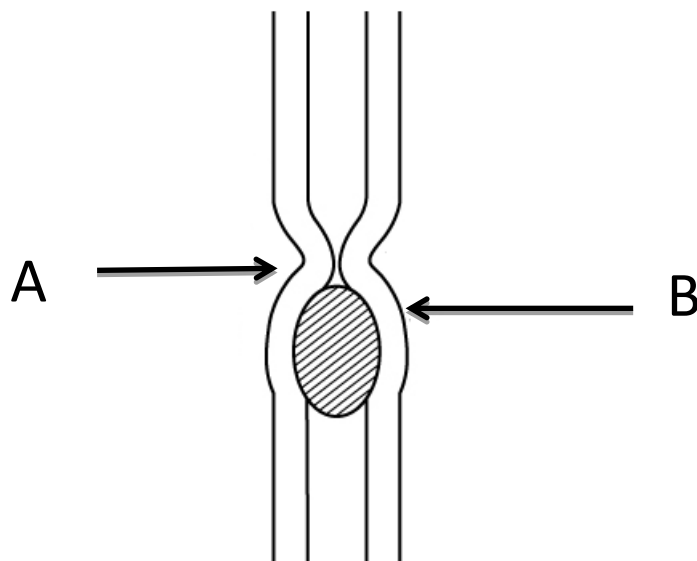
ii) Why are digestive enzymes required in digestion? (1 mark)

2. The digestive system is a continuous tract made up of a number of organs and accessory organs. Each organ has a different role in digestion.

a) The mouth is the first organ of digestion.

i) Identify two ways in which the mouth is adapted for efficient digestion. (2 marks)

b) The diagram below depicts a process that occurs during digestion.



i) What is this process called? (1 mark)

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ii) What is the purpose of this process? (1 mark)

iii) Explains what the muscles in the lining of the wall are doing at points A and B in the diagram (3 marks)

iv) Identify one organ where this process takes place. (1 mark)

3. The stomach has many roles in digestion, including preparing the consumed food for the rest of the digestive process.

a) i) What enzymes are released in the stomach? (1 mark)

ii) Which stomach cells release hydrochloric acid and why is it important in digestion? (3 marks)

iii) What other substance makes up the gastric juice in the stomach and what is its function? (2 marks)

b) The small intestine is the organ where most digestion occurs.

i) How is the small intestine adapted for absorption? (4 marks)

ii) The pancreas works closely with the small intestine. What is the role of the pancreas in digestion? (2 marks)

iii) Potatoes contain starch. Using your knowledge of digestion describe the process by which potatoes are broken down in digestions. (5 marks)

c) Glucose is a carbohydrate monomer. Some of it diffuses directly across the epithelium membrane however the remaining glucose enters the intestine epithelium by active transport.

i) Explain how the remaining glucose is transported from the small intestine to the blood. (5 marks)

d) The liver and gall bladder are two other accessory organs in the digestive system.

i) What is the role of the liver and gall-bladder in digestion? (3 marks)