

Chemical digestion: practice questions

4 questions • 12 marks • mark scheme at the back

For Cambridge IGCSE Combined Science 0653. **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 12

1 **Supplement** [1 mark]

Which shows the products of the digestion of fats and oils by lipase?

- A . ☐ Amino acids
- B . ☐ Fatty acids and glycerol
- C . ☐ Simple reducing sugars
- D . ☐ Maltose and glucose

2 (a) Describe what is meant by chemical digestion. [2] (b) Explain why the products of chemical digestion can be absorbed into the blood. [1] [3 marks]

.....

.....

.....

.....

.....

3 **Supplement** [6 marks]

Complete the table for the three digestive enzymes.

Digestive enzymes			
Enzyme	Substrate	Product	Where secreted
Amylase			
Protease			
Lipase			

.....

.....

.....

.....

.....

.....

.....

.....

4

Supplement

[2 marks]

Describe two functions of hydrochloric acid in gastric juice.

.....

.....

.....

.....

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [1] Supplement

B B

2. [3]

- (a) breakdown of large molecules (1)
- insoluble molecules into small soluble molecules (1)
- (b) they are small and soluble / can pass through the gut wall (1)

3. [6] Supplement

- amylase: starch (1)
- amylase: simple (reducing) sugars (1) allow maltose; ignore sugar unqualified
- amylase: salivary glands / pancreas (1)
- protease: protein and amino acids (1)
- protease: stomach / pancreas (1)
- lipase: fats and oils and fatty acids and glycerol (1)
- lipase: pancreas (1)
- Max 6

4. [2] Supplement

- kills harmful microorganisms / bacteria in food (1)
- provides an acidic pH for optimum enzyme (protease / pepsin) activity (1)