

Full Higher Separate content. ★ = Higher Tier. ◆ = Separate Science only.

Q1. State the enzyme, substrate and products for THREE types of digestion.

[3 marks]

Q2. Explain the role of bile in fat digestion.

[2 marks]

Q3. Describe how villi are adapted for absorption in the small intestine.

[3 marks]

Total: 8 marks

Q1 (3 marks)

State the enzyme, substrate and products for THREE types of digestion.

- Amylase: starch → sugars [1]
- Protease: protein → amino acids [1]
- Lipase: fats → fatty acids + glycerol [1]

Q2 (2 marks)

Explain the role of bile in fat digestion.

- Bile emulsifies fats — breaks into smaller droplets [1]
- Increases surface area for lipase → faster digestion [1]

Q3 (3 marks)

Describe how villi are adapted for absorption in the small intestine.

- Large surface area — many villi with microvilli [1]
- Thin walls (one cell thick) — short diffusion distance [1]
- Dense capillary network — absorbs and transports nutrients rapidly [1]