

Human nutrition practice questions

11 questions • 30 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 / 30

Diet **Spec B7.1**

- 1** Name the nutrient that is needed for each of the following uses in the body. (a) Growth [3 marks]
and repair of tissues (b) Making haemoglobin (c) Providing insulation and an energy store

- 2** Describe what is meant by a balanced diet. [2 marks]

- 3** Complete the table by stating one dietary source and one importance for each nutrient. [4 marks]

Nutrients		
Nutrient	Dietary source	Importance
Calcium		
Fibre		

4 Which statement about nutrients is correct?

[1 mark]

- A. ☐ Vitamin D helps the absorption of calcium
- B. ☐ Iron is needed to make bones
- C. ☐ Water provides energy
- D. ☐ Protein provides insulation

The digestive system Spec B7.2, B7.3

5 In which organ is bile stored?

[1 mark]

- A. ☐ Liver
- B. ☐ Pancreas
- C. ☐ Gall bladder
- D. ☐ Duodenum

6 Complete the table to show the function of each organ.

[4 marks]

Organs of the digestive system	
Organ	Function
Salivary glands	
Liver	
Colon	
Anus	

7 Define each term. (a) ingestion (b) absorption (c) assimilation

[3 marks]

Spec B7.3

Supplement

[1 mark]

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

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

[illegible]

Supplement

[6 marks]

Digestive enzymes			
Enzyme	Substrate	Product	Where secreted
Amylase			
Protease			
Lipase			

[illegible]

Supplement

[2 marks]

.....

.....

.....

.....

Mark scheme

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

1. [3]

- (a) protein (1)
- (b) iron (1)
- (c) fat(s) / oil(s) (1) allow lipid(s)

2. [2]

- contains all the nutrients / carbohydrates, fats, proteins, vitamins, minerals, fibre and water (1)
- in the correct proportions / amounts (1)
- gives the right amount of energy for the person's needs / age, sex, activity (1)
- Max 2

3. [4]

- calcium source: milk / cheese / yoghurt / dairy foods (1)
- calcium importance: making bones and teeth / strong or hard bones and teeth (1)
- fibre source: wholemeal bread / vegetables / fruit / cereals (1)
- fibre importance: provides bulk for muscles of gut to push food along / prevents constipation (1)

4. [1]

A A

5. [1]

C C (gall bladder)

6. [4]

- salivary glands: make / secrete saliva / amylase (1)
- liver: makes bile (1) allow assimilation / uses absorbed nutrients, e.g. amino acids to make proteins
- colon: absorbs water (1)
- anus: egestion / faeces leave the body (1)

7. [3]

- (a) the taking of substances, e.g. food and drink, into the body (1)
- (b) the movement of nutrients from the intestines into the blood (1)
- (c) uptake and use of nutrients by cells (1)

8. [1] **Supplement**

B B

9. [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)

10. [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

11. [2] Supplement

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