1 Small molecules are used as the basic units in the synthesis of large food molecules.

Which statement is correct?

A Amino acids are basic units of carbohydrates.

B Fatty acids are basic units of glycogen.

C Glycerol is a basic unit of oils.

D Simple sugar is a basic unit of protein.

2 When a substance is added to meat, amino acids are produced.

What is this substance?

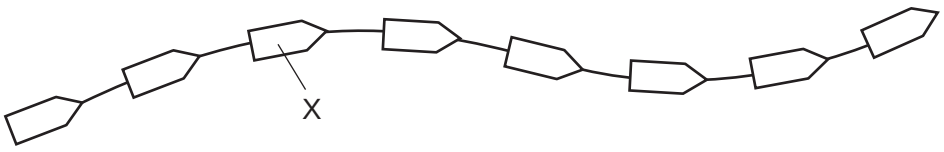
A a hormone

B an enzyme

C an oil

D water

3 The diagram shows part of a protein molecule.



What does X represent?

A amino acid

B fatty acid

C glycerol

D sugar

4 Four different foods were tested for their composition.

The results are shown in the table.

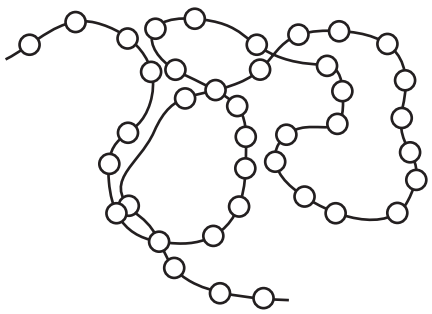
Which food contains protein but **not** reducing sugar or starch?

	Benedict's test	iodine test	biuret test
A	blue	black	purple
B	blue	brown	purple
C	brick red	black	blue
D	brick red	brown	blue

5 What are the smaller basic units of starch and glycogen molecules?

	starch	glycogen
A	amino acids	fatty acids and glycerol
B	amino acids	simple sugars
C	simple sugars	fatty acids and glycerol
D	simple sugars	simple sugars

6 The diagram represents a protein molecule.



What do the small circles represent?

A amino acids

B fatty acids

C glycerol

D simple sugars

7 Which row shows the elements and basic units that are used in the construction of large food molecules?

	food molecules	elements	basic units
A	fats	carbon, hydrogen, oxygen, nitrogen	glucose
B	fats	carbon, hydrogen, oxygen, nitrogen	glycerol
C	starch	carbon, hydrogen, oxygen	glucose
D	starch	carbon, hydrogen, oxygen	glycerol

8 Which nutrient produces a purple colour when mixed with biuret solution?

A fat

B protein

C reducing sugar

D starch

9 Which simple molecules are the basic units of protein?

A amino acids

B fatty acids

C sugars

D vitamins

10 Which food-testing reagent shows a positive result when it turns from blue to purple?

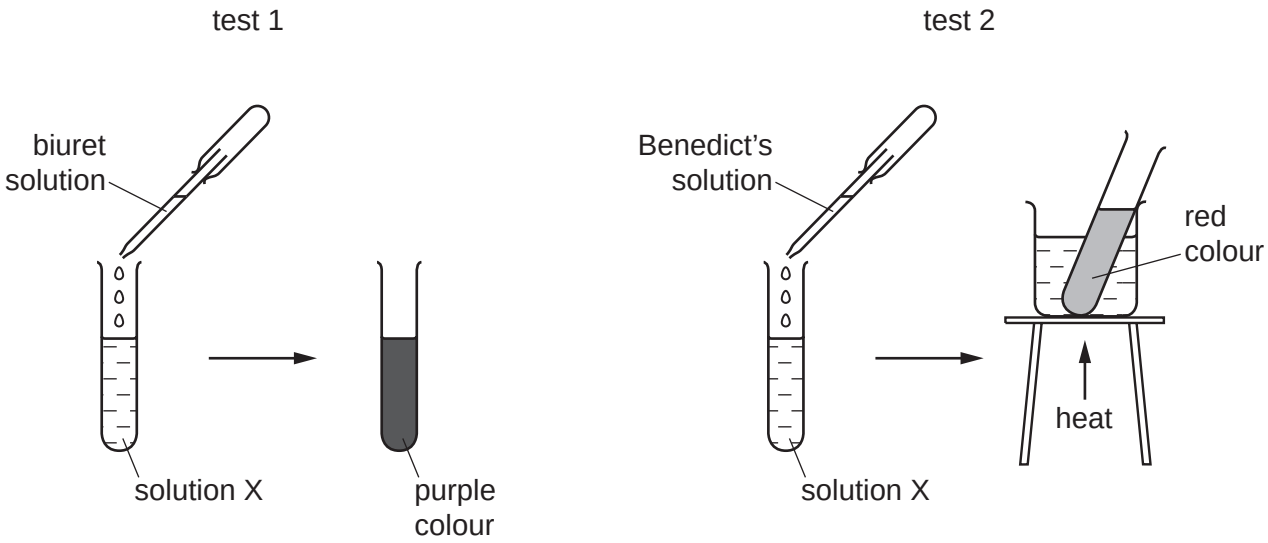
A Benedict's solution

B biuret reagent

C ethanol

D iodine solution

11 The diagram shows two food tests carried out on solution X.



Which nutrients are present in solution X?

A protein and starch

B protein and sugar

C starch and fat

D starch and sugar

12 The data show the concentrations of sugar and starch in an onion.

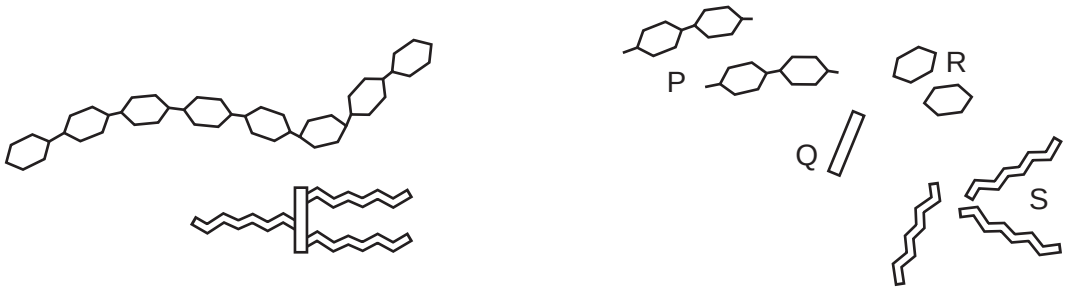
total sugar including reducing sugar / g per 100g	starch / g per 100g
3.7	0.

The onion is tested with Benedict's solution and iodine solution.

Which set of results is correct?

	Benedict's solution	iodine solution
A	blue	blue-black
B	blue	brown
C	brick red	blue-black
D	brick red	brown

13 The diagram shows two food molecules before and after they have been digested by enzymes.



before after

What identifies the products of fat digestion?

A P and R **B** P and S **C** Q and R **D** Q and S

14 Four foods were tested for each of the following nutrients:

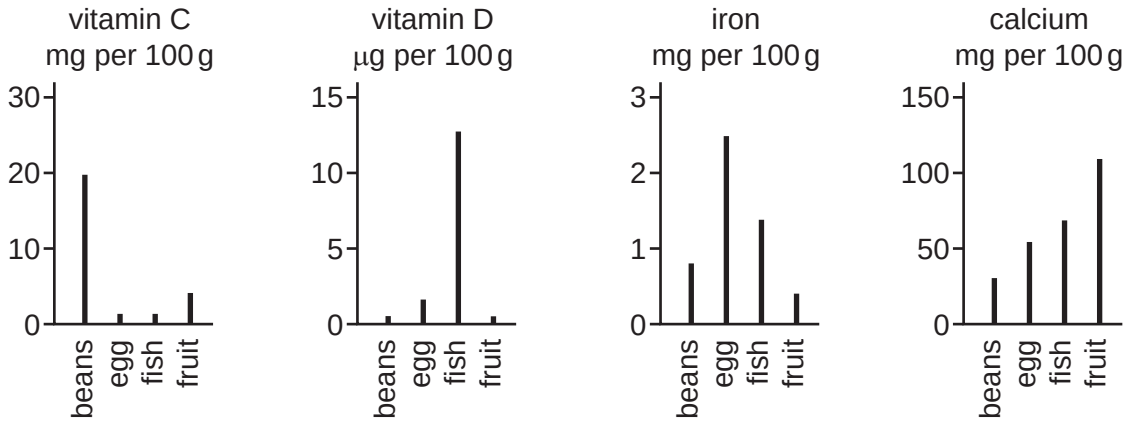
fat (using ethanol);
protein (using the biuret test);
reducing sugar (using Benedict's solution),

Which food contains protein and fat?

	colour of result of food test		
	purple/lilac	brick-red/orange	milky-white
A	✓	x	✓
B	✓	x	x
C	x	✓	✓
D	x	✓	x

key
✓ = nutrient present
x = nutrient absent

15 The graphs show the quantities of selected vitamins and mineral ions in four foods.



Which food is the richest source of the vitamin or mineral ions essential for the transport of oxygen by the blood?

A beans

B egg

C fish

D fruit

16 A human cell contains a length of DNA that carries the code for making which substance?

A fat

B glycogen

C lipase

D starch

17 A student set up a test-tube containing starch, water and amylase.

How could the student test whether the amylase had digested all the starch?

A Add Biuret solution.

B Add dilute hydrochloric acid.

C Add iodine solution.

D Weigh the test-tubes and contents before and after the experiment.

18 When solution X is tested with iodine solution, a blue-black colour is observed.

A different solution, Y, is added to a new sample of solution X and the mixture is shaken and left for 30 minutes at 40 °C. When tested with iodine solution, an orange-brown colour is observed.

What are solutions X and Y?

	X	Y
A	maltose	amylase
B	maltose	lipase
C	starch	amylase
D	starch	lipase

19 Which row correctly identifies the chemical elements found in proteins?

	carbon	hydrogen	oxygen	nitrogen
A	✓	✓	✓	✓
B	✓	✓	✓	✗
C	✓	✗	✓	✗
D	✗	✓	✗	✓

key

✓ = present

✗ = absent

20 Nutrients are made up of smaller basic units. Nutrients can be identified by food tests.

Which nutrient is a protein?

nutrient	smaller basic units	food test
A	amino acids	Benedict's test
B	amino acids	biuret test
C	sugars	Benedict's test
D	sugars	biuret test

21 Which pair of substances is transported in the phloem?

A amino acids and protein

B amino acids and sucrose

C protein and starch

D starch and sucrose

22 Water is a good solvent.

What does this mean?

A It dissolves well in many other substances.

B It flows easily through vessels.

C It is permeable to gases.

D Many substances dissolve well in it.

23 What does the digestion of starch produce?

A fatty acids

B glucose

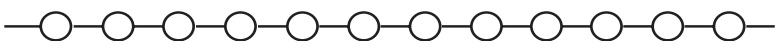
C mineral salts

D water

24 Which solutions are used for testing for protein, reducing sugar and starch?

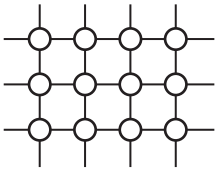
	test for protein	test for reducing sugar	test for starch
A	Benedict's	iodine	biuret
B	biuret	Benedict's	iodine
C	biuret	iodine	Benedict's
D	iodine	biuret	Benedict's

25 The diagram shows part of a starch molecule.

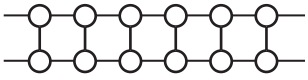


Which diagram shows this molecule after it has been **completely** digested?

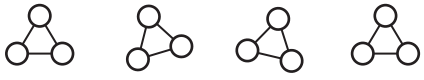
A



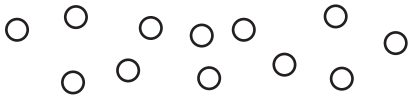
B



C



D



26 Four foods were tested for

fat (using ethanol),

protein (using the biuret test),

reducing sugar (using Benedict's solution),

starch (using iodine solution).

Which food contains protein and starch?

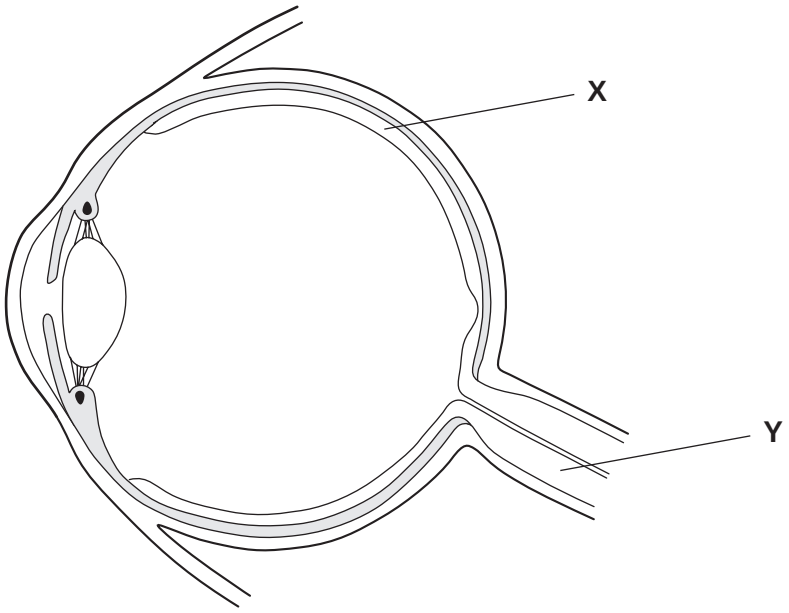
	colour of result of food test			
	blue / black	purple / lilac	bric-red / orange	milky-white
A	✓	✗	✓	✗
B	✓	✓	✗	✗
C	✗	✗	✓	✓
D	✗	✓	✗	✓

key

✓ = nutrient present

✗ = nutrient absent

27 The diagram shows a section through an eye.



What are structures **X** and **Y**?

A organs in an organ system

B organs in a tissue

C organ systems in an organ

D tissues in an organ

28 Which elements do carbohydrates contain?

A carbon, hydrogen and oxygen

B carbon, hydrogen and sulphur

C carbon, nitrogen and oxygen

D carbon, nitrogen and sulphur